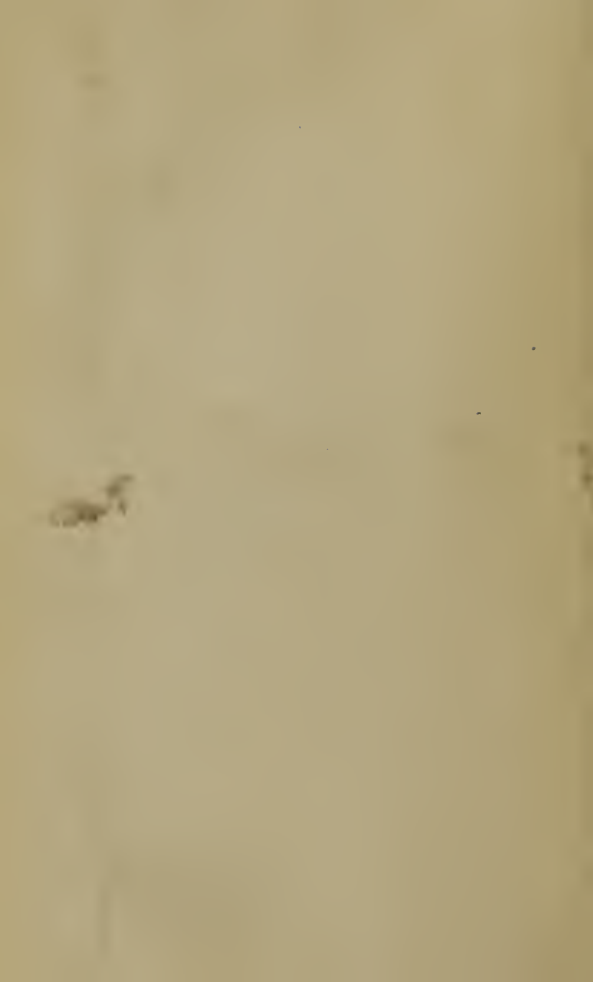




DUE

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MANUAL
OF
THERAPEUTICS.

BY L. MARTINET, D. M. P.

TRANSLATED, WITH ALTERATIONS AND ADDITIONS,

ROBERT NORTON, M. D.

Extraordinary Member of the Medical Society of Edinburgh.

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TO

W. P. ALISON, M. D., F. R. S. E.

**PROFESSOR OF THE INSTITUTES OF MEDICINE IN THE
UNIVERSITY OF EDINBURGH;**

IN ADMIRATION OF THE

VIRTUES AND LEARNING

WHICH ADORN AND DIGNIFY HIS CHARACTER,

AS WELL AS IN

GRATEFUL REMEMBRANCE OF NUMEROUS OBLIGATIONS,

THIS TRANSLATION IS INSCRIBED.

ANNEX
Mat. Med.

HOA VU 2000-2001

PREFACE,

BY THE TRANSLATOR.

IN undertaking the following translation, I was actuated by a conviction, not only of the value of the original, but also of the want of a similar work, to supply a vacancy in our own medical literature, which, though abounding in systematic treatises on theory and practice conjointly, contains scarcely one which is exclusively devoted to Therapeutics, and in which the intricacies of this department of medicine are very fully developed.

It will be proper, and it may obviate prejudice on account of its foreign extraction, to mention that this work is not an exact translation; for, professing to offer to the English student a manual of practice, I considered it necessary to sacrifice the

duty of a translator to that of an instructor, whenever the two seemed incompatible.

The additions to the original, when sufficiently definite and important, are included within brackets. [] They consist principally of analyses of English works, particularly those of Abercrombie, Armstrong, Bateman, Macculloch, Mills, Prout, Scudamore, Thomson.

Peckham Rye,
4th of 12th Month, 1829.

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MANUAL
OF
THERAPEUTICS.

DISEASES OF THE BRAIN.

ARACHNITIS.

WHEN arachnitis has existed during a few days only, and still exhibits the characteristic symptoms of the first stage of this inflammation, namely, severe pain in the head with fever; and when there is no reason to doubt that these symptoms proceed from an affection of the brain, venesection should be immediately practised, and the blood permitted to flow until the morbid excitement of the vascular and nervous systems is subdued. It is recommended, in affections of the brain, to open a vein in the foot, or, when the violence of the attack makes it important to effect depletion as quickly as possible, in both feet simultaneously: but the abstraction of blood from the arm is less difficult in its execution, and much more certain in its results.

The quantity which should be drawn can only be regulated by the intensity of the symptoms, and the strength of the patient's constitution, unless some known idiosyncrasy excites peculiar apprehension of extreme subsequent collapse.

The most advantageous opportunity for the abstraction of blood is during the greatest exacerbation of fever, as the loss of this fluid is better sustained, as well as more necessary, at this than at any other time.

Infancy does not at all contra-indicate general bleeding, which should be practised whenever the veins are sufficiently prominent; it may even be repeated if no bad consequence ensued after the first operation, and the symptoms of inflammation continue.

Should the pain in the head continue with undiminished severity after a second blood-letting, it will be advisable to have recourse to leeches; these may be applied at the base of the skull, behind the ears, upon the temples, or in the course of the jugular veins. The flow of blood will be greatly promoted by the application of exhausted glasses over the punctures; by this means, also, a salutary revulsion from the internal organs is established.

If the congestion of the face is in any degree more considerable on one side than on the other, or if the patient has ever had epistaxis, we should apply the leeches within the nostrils, taking care, however, by pinching the nose, to prevent them from getting up too far, or escaping into the pharynx.

Should the pulse still maintain its strength, and the patient feel little weakened by previous bleedings, we must not hesitate to apply a greater number of leeches; to the amount of thirty, or even fifty, in an adult, and from five to twenty in a young child.*

* It often happens to children, that the blood flows too abundantly, and is not arrested by simple pressure. In such a case, pinching the skin between two fingers, we must raise the punctured spot; and touch it with a stick of caustic, finely pointed for the purpose; or, if that fails, with a fine iron wire at a white heat. Another effectual

Consider that it is only during an early period of inflammation in the brain, that we can exercise any power over it, and the necessity of a vigorous treatment will be obvious.

Such a treatment is peculiarly adapted to cases of arachnitis which are accompanied by erysipelas of the face, or have arisen in consequence of a blow on the head, or insolation. On the other hand, it is the least proper when inflammation of the brain has supervened on the suppression of some sanguineous discharge; to attempt to supply the place of which, by the application of leeches to its original seat, is evidently the first indication; though, even in this case, general bleeding must be resorted to if leeching fails. It is always important, especially in the arachnitis of children, to allay by emollient cataplasms, irritation of the hairy scalp, while the return of a formerly existing eruption should be encouraged.

Dr. Bland has suggested the practicability of opposing excessive determination of blood to the brain, by compression of the carotid arteries, and in the hands of its author it appears to have been frequently successful: in a thin subject this is easily accomplished, by drawing the carotids forwards, towards each other, and then pressing them against the larynx: in fat or muscular subjects, it is necessary to recline the head and press the arteries against the vertebral column. This compression should be persevered in the longer, as the cerebral congestion is more considerable; it must, however, be occasionally interrupted.

plan is, to cover the wound with agaric, and press upon it a heated silver spoon; the heat coagulates the blood, and thus a clot is formed, which prevents any further flow. Lastly, we may effectually obliterate the orifice by a little wedge of wood, split up the middle, and used as a wick.

[Dr. Parry also has attempted to prove, that the flow of blood to the brain can be intercepted by this means, the employment of which, he considers to be of the highest importance in the treatment of cerebral affections: the general opinion appears to be, that it is too difficult of execution, and too uncertain in its results, to be worthy of particular attention: at the utmost, its influence cannot be more than temporary.]

The antiphlogistic treatment should be seconded by placing the feet in hot water; or, if the patient cannot be taken out of bed for this purpose, manuluvia may be substituted. The irritation thus excited, will be still greater on adding to the water the flour of mustard, sea salt, potash, or muriatic acid.

Barley water, mead, mucilage, &c., form the best ordinary beverage, except in cases attended with constipation, in which, fluids that are gently laxative, such as whey, decoction of prunes, tamarinds, should be preferred.

Lastly, it is important to remove the patient from the influence of every thing calculated to over-excite the brain, as noise, vivid light, and, especially, the presence of persons, who would call into exercise his moral feelings.

Occasionally an epidemic, or some peculiar condition of the *primæ viæ*, seems to give a character to whatever local inflammation may be complicated with it. In such circumstances, the treatment of arachnitis must begin with evacuants. Thus an injection with one or two grains of tartarized antimony, and a gentle laxative, such as Seidlitz water, or Castor oil, render bleeding more effectual, independent of their proper action. But before adopting this mode of evacuation, we must be quite sure that no inflammation exists in the intestinal canal; otherwise, the aggravation which the abdominal disorder would

suffer, would be equally communicated to the membranes of the brain.

When worms, as so frequently happens with children, are found to exist, we must not suffer ourselves to be diverted from the proper treatment of arachnitis by the erroneous opinion that they are the sole source of the symptoms which are observed in the head. After having attempted, by the administration of a purgative, to effect their expulsion, we must pursue the plan already pointed out; avoiding unnecessary stimulation of the alimentary canal, which, at this period of life, exerts so powerful an influence over the brain. Even the application of leeches to the epigastrium, or anus, is sometimes a valuable auxiliary in the treatment of arachnitis in children, especially when it sets in with vomiting although only sympathetic, or during the existence of any abdominal inflammation.

If an infant labours under arachnitis at the time of dentition, during which its gums are very painful, two or three leeches applied to the mucous membrane of the mouth will give much relief, and assist the action of other measures.

When arachnitis has arrived at its second stage, recognised by great mental excitement, and confusion of ideas, if the inflammation has attacked the hemispheres; or by drowsiness, if it is seated at the base of the brain, we may, in addition to the means recommended above, make an incision in the jugular vein, provided that the appearance of the blood previously drawn, and the severity of the disease, call for it, and it is not contra-indicated by the debility of the patient.

[As, however, there is only a very slight and indirect communication between the external jugular veins and the meningeal arteries, little superiority can be justly attributed to this mode of abstracting

blood ; which is, moreover, not altogether free from danger.]

To oppose the return of cerebral congestion, it is proper to cover the head with thin linen cloths, repeatedly wetted with cold water, the temperature of which should be made gradually lower, to prevent subsequent re-action. Pulmonary catarrh, which is sometimes the consequence of these cold applications, must be guarded against, by covering the chest with flannel.

We can exercise a powerful control over the general reaction, (that is, frequency of pulse with heat of skin,) as well as over the cerebral disturbance, and the convulsions which so frequently occur in children, by directing a continued stream of cold water upon the head, and if the organs of the chest are in a healthy state, over the whole body ; otherwise the patient must be previously placed in a warm bath, up to the neck.

These affusions should be repeated as often as the cerebral excitement, heat of skin, and frequency of pulse, return ; they must, however, be discontinued, if the body does not readily recover its natural temperature, and especially if it remains cold ; also, if the patient grows weaker and his pulse becomes smaller and more frequent. On the contrary, when the general heat, developement of pulse, and signs of cerebral congestion increase, it becomes necessary, though with much caution, to renew the application of leeches to the base of the skull.

If the period of reaction and excitement has nearly passed away, and the antiphlogistic treatment has not succeeded in overcoming the disease, but, on the contrary, the body in various parts is losing its sensibility, and debility and stupor become extreme, with almost total loss of intellect, and a small feeble pulse, we must no longer expect assistance from the abstraction of blood ; if, however, this measure has not

been previously resorted to, a trial of it may be made, though with the utmost caution, beginning with the application of a few leeches to the neck : we must rather endeavour to prevent the supervention of a fatal collapse, by exciting counter-irritation on the inferior extremities : dry cupping, and the application of sinapisms, or blisters, to the thighs and legs, answer this purpose. If, notwithstanding, the state of coma continues, a large blister made more powerful by the addition of ammoniacal ointment, should be applied to the back of the neck ; the irritation produced by it will probably occasion a temporary excitement, during which other remedies may be resorted to.

In infants, mercurial friction at the angle of the jaws, has often been followed by the happiest results.

When bleeding, cold affusions and blistering have all failed to arrest the progress of this disease, a chance of success still remains, in a violent stimulation of the intestinal canal. Frequently in such cases, have we derived the greatest benefit from the employment of large doses of tartarized antimony, which should be taken as it were sheathed in some sirup or mucilaginous fluid. But as soon as the patient begins to recover from this state of stupor, and his sensibility awakens, we must suspend or diminish the quantity of the tartar emetic, lest we produce such an excessive excitement, as may exhaust life. It will then be proper to have recourse to injections of the decoction of cinchona, to the administration of the acetate of ammonia, camphor, the sulphate of quina, and ether, in moderate quantities, watching most attentively the effects of these remedies, and taking care to suspend them on the first alarm ; hot cataplasms are to be applied to the feet, and afterwards sinapisms, which should be shifted to various parts successively, of the feet and legs ; while the abdomen, chest and extremities, are to be rubbed with aromatic tinctures, ammoniacal liniment, or ether. As soon as nature appears

to have recovered from the shock, consider that she has resources, little known to us, and often beyond our expectation, and that it is often the duty of the physician simply to stand on the defensive, and gain time. Lastly, should the patient escape through this danger, it will be advisable to keep up a blister in the inferior extremities : this precaution is especially applicable to children, who are greatly disposed to relapses of inflammation.

It can scarcely be necessary to suggest the caution not to mistake, for this third stage of the disease, the tendency to sleep, or the coma with strong reaction, which occurs in the second stage of arachnitis at the base of the brain : in which, as we have before mentioned, hot pediluvia, affusions, and the tepid bath, are indicated.

When arachnitis is accompanied from the first, with deep stupor, the powers of life seeming almost exhausted, and no reaction ensuing ; when the absence of local paralysis or of true coma, evinces that the cause of this prostration is neither effusion into the brain, nor disorganization of its structure, we must avoid the abstraction of blood, especially by venesection, which would only increase the exhaustion of the patient ; and endeavour, by affusions of cold water, to recover the nervous system from the stupor into which it has sunk : affusion has, in this case, a double advantage ; it arouses into action the various functions, without waste of strength, and restores sensibility to the skin, thus enabling us to excite a cutaneous revulsion, which would have been otherwise unattainable. The water employed for this purpose, should be of a much lower temperature in these instances, than in those for which we have prescribed it above ; it being required so much the colder, as the stupor of the patient is the more profound ; but, on the other hand, the affusion must be continued for a shorter time.

and it will be necessary to keep up the warmth of the patient's body, especially if reaction is established with difficulty. Permanent cold applications to the head should not be employed, unless indicated by head-ache, a flushed face, rapid pulse, or hot skin, and then the application of leeches to the neck, or the lancet, will be also necessary.

If the phenomena of arachnitis appear very gradually, or if the disease has already passed into a chronic state, its further progress will be most effectually stopped by the continued action of artificial drains, such as a seton, inserted in the back of the neck; moxa applied on each side of the vertebral column near the occiput; and by the general or local abstraction of blood, whenever cerebral congestion appears; also, in obstinate cases, by cold applications and affusions; by the habitual use of aperients, (of which calomel is the best for children,) unless some part of the alimentary canal is inflamed; by injections, and, lastly, by removing the patient from the influence of those causes which keep up inflammation, such as exposure to the sun's rays, a stimulating and too abundant diet, mental uneasiness, &c.

ACUTE HYDROCEPHALUS.

The treatment of acute hydrocephalus of the ventricles of the brain is to be conducted throughout its course as if it were arachnitis, of which indeed it is merely a variety, and from which it is scarcely possible to distinguish it. The great object of the physician is to prevent effusion, for experience proves, that when this has occurred to any considerable extent, the resources of art are seldom available. It may, notwithstanding, be asserted, that it is easier to effect the absorption of effused fluid in

hydrocephalus, than in arachnitis, in which alterations of structure, and the growth of false membranes, present almost insurmountable obstacles.

In infants, who, as is well known, are peculiarly liable to this species of dropsy, the serous effusion is formed with such astonishing rapidity, that the utmost activity is necessary to anticipate and obviate it by medical treatment: it is therefore proper to direct the application of leeches to the temples, and of mustard pediluvia, whenever a child complains of pain in the head, although there may be no fever, provided that the origin of the sensation is manifestly in the head, and not in the stomach or bowels: in this last case, it would be more serviceable to apply the leeches over the abdomen.

If, to this head-ache, are added vomiting, fever, and drowsiness; while the tongue is clean, large, moist, and without redness; the abdomen soft, of natural heat, and free from pain on pressure; and the alvine evacuations of their usual appearance, venesection, and the application of leeches to the neck, must be employed, and repeated if the patient's strength will permit, and he should appear to have derived benefit from them; together with the abstraction of blood, pediluvia, irritating manuluvia, cold injections, warm baths, and affusions, are to be made use of, especially at the time of each paroxysm. Immediately after the bleeding, blisters and sinapisms should be applied to the inferior extremities.

It is unnecessary to enter into further details of the plan of treatment, as it is just the same as that described under the word *Arachnitis*.

The same measures should be resorted to in cases of convulsion of the limbs or face, combined with loss of consciousness, and coma, when these last symptoms have recently arisen, and the strength of the patient is not too much exhausted. In opposite circumstances, any further loss of blood would only

accelerate the fatal issue of the disease. It is to affusions, the continued application of cold water to the head, and to warm baths, that we must then trust, unless there is unnatural coldness of the surface of the body, a state of which we shall speak more fully afterwards.

But as soon as blood-letting ceases to be followed by any amelioration of the disease, if the symptoms of affusion advance, and the patient becomes gradually weaker, with a pulse either extremely quick or extremely slow, we must endeavour to produce a powerful revulsion, by inserting a seton in the nucha, applying moxa or the cautery over some part of the skull, rubbing in antimonial or ammoniacal ointment behind the ears, and by mercurial frictions at the angles of the lower jaw, or on the hairy scalp, so as to excite profuse salivation.

It is at this period, if the alimentary canal is free from inflammation, that calomel is employed with the greatest advantage, whether as a sialagogue, or only as a common purgative. For either purpose, four grains, or more if necessary, [and it is extremely difficult to produce salivation in hydrocephalus,] may be given three or four times in the day ; but with respect to this medicine, it may be well to observe, that it is always prudent to commence with small doses, its action being so much varied by individual peculiarities. Rhubarb combined with the calomel often makes it more efficacious : purgative injections also are indicated.

The employment of tartarized antimony, in nauseating doses of one grain in a five or six ounce mixture, of which a tea-spoonful is to be taken every second hour, has been by some practitioners highly recommended in this stage of acute hydrocephalus, but vomiting should generally be carefully avoided in inflammatory affections of the brain.

If the disease still lingers, and the alimentary

canal remains unaffected, it will be allowable to sustain the patient's strength by tea-spoonfuls of white wine or ether, or by small quantities of bark; the extremities and abdomen may be rubbed with camphorated oil or tinctures; at the same time giving internally, either by the stomach or rectum, castor, musk, ether, &c. although no great expectations of benefit from such substances can be entertained at this advanced period of the disease.

In some cases we have known very strong coffee dissipate the drowsiness, recall the lost warmth of the skin, and thus become the principal cause of cure.

We may include, among the remedies applicable in these circumstances, the use of a very hot bath, in which the patient is to be immersed for a few minutes, and then carefully wrapped up in flannels, so as to excite a profuse perspiration.

With respect to the internal administration of drastic purgatives, as gamboge, colchicum, &c., they ought to be looked upon only as a last resource; doubtless the employment of these medicines has been occasionally beneficial, but we ought first to give more probable measures a fair trial; as frictions, they are still less likely to be of use.

If an attack of hydrocephalus has supervened on scarlatina or measles in a leucophlegmatic habit, much benefit may be expected from frictions over the whole surface, with tincture of squill, or digitalis; from the compound powder of ipecacuanha, nauseating doses of tartar emetic, the acetate of ammonia, vapour baths, and the application of blisters to the extremities; whenever the condition of the bowels, and the absence of violent febrile reaction, and of any signs of cerebral congestion, render such measures safe.

This plan, though equally just in principle, appears less successful in the hydrocephalus which

comes on suddenly in leucophlegmatic persons who have previously laboured under any organic affection of the heart, lungs, or abdominal viscera. In cases of this kind, it is not allowable to abstract blood, unless there should be extreme dyspnœa, or a very disturbed action of the heart.

Our prognosis of the local paralysis which, in acute hydrocephalus, arises from a partial serous effusion, may be much more favourable than in those cases where this symptom depends on an altered structure of the brain; and this renders it the more imperative on the practitioner to employ every measure for the absorption of the fluid which is calculated to effect that object.

The patient must drink nothing but slops, made more nourishing if the disease is protracted beyond the first or second week.—See also *Arachnitis*.

[Dr. Abercrombie considers that active purging and the application of cold water in a long continued stream to the head, are, after bleeding, the most powerful remedies in hydrocephalus. This author and Monro secundus agree in thinking that the reputation of mercury in this disease is greater than its efficacy. Monro tertius states that he has cured hydrocephalus by the application of a large blister composed of tartar emetic and wax ointment to the head, and the use of calomel combined with James's powder. Dr. Mills, in an excellent paper on this subject, in the Dublin Hospital Reports, recommends at the commencement of the disease, venesection, carried each time nearly to deliquium, in order that some permanent impression may be made upon the circulation in the brain, and active purging; and as auxiliary remedies, a combination of calomel and opium, which is useful by determining to the surface, increasing the secretions, and allaying the irritation of the nervous system; the tepid bath, used twice or thrice daily; tartarized antimony, in

doses varying from one fourth of a grain to ten grains, and when the high excitement has ceased, the application of blisters.]

CHRONIC HYDROCEPHALUS.

It is of little practical importance whether this disease is congenital or acquired, but it is highly important to take into consideration the condition of the patient's general health.

If this is tolerable, and the disease stationary, we must not run any risk of making the child worse by very powerful measures, as success in the treatment of hydrocephalus will always greatly depend on the preservation of the health in other respects.

In this case, it is better to be contented to maintain a regular action of the bowels, by the exhibition of rhubarb, castor oil, and calomel. in small doses: eruptions on the head, or discharges from the ear, which are so common in childhood, are to be kept up by poultices or epispastics, and, if their suppression has occasioned the disease, they should be reinduced by applying blisters over the place where they formerly existed. We should order nourishing food, with small quantities of wine, and direct the friends of the child to take every opportunity to invigorate his strength in the fresh open air; if the state of the stomach will admit, bitters or tonics will be proper; general dry rubbing, and frictions with the tincture of squill, digitalis, or cinchona, over the trunk, should be employed for the purpose of exciting the functions of the skin and kidneys. If there is no danger of weakening the patient too much, the moxa may be applied along the sides of the vertebral column, on the crown of the head, or in the neighbourhood of the mastoid processes.

If the disease advances slowly, it may perhaps be arrested by the habitual use of warm baths, impregnated with tartarized antimony; an ounce of the salt in each pailful of water, is a proper quantity to begin with: it may, however, be gradually elevated to four or five ounces. This plan has been attended with the happiest results in the hands of Dr. Recamier and Dr. Andrieux, from whose observations its efficacy seems to depend on its producing a copious flow of urine. Under the employment in this way of the tartar emetic, the patient has grown thin, and the size of the head has sensibly diminished.

The method proposed by Goelis is also applicable in this stage of chronic hydrocephalus. It consists in the internal exhibition of calomel and juniper berries, and frictions over the head with Neapolitan ointment, afterwards covering it with a woollen cap, so as to keep up a continual irritation on the scalp. This physician assists the action of these remedies by issues in the neighbourhood of the head, and the long continued use of alkaline baths.

But when chronic hydrocephalus advances, while the debility of the patient leaves little room for hope of his recovery, a large blister should be placed on the head and suffered to remain during two or three days, the vesicles, however, being occasionally punctured. This, with mercurial frictions carried to salivation, and a powerful revulsion excited by means of purgatives in the intestinal canal, (provided that the stomach and bowels are in a healthy condition,) comprises the whole but very inadequate treatment of such cases.

Compression has been proposed by Sir Gilbert Blane and Dr. Barnard; it has seemed successful in some instances, and if all other means fail it may be employed as a last resource.

Where cerebral congestion supervenes, it should be combated by bleeding and the use of pediluvia.

&c. in the manner described under *Arachnitis* and *Acute Hydrocephalus*.

It is perhaps possible that this disease may in some cases be prevented by avoiding the practice of washing the heads of young children in cold water; at least, it was to this practice that P. Frank attributed the increased frequency of chronic hydrocephalus during the last years of his life.

If a child disposed to hydrocephalus, lives in a low, hot, damp, or confined situation, it is very important to remove him to some more elevated and salubrious spot. The happiest effects from this simple precaution are daily witnessed in Valais, a district in which, as is well known, hydrocephalus is almost epidemic.

APOPLEXY.

The treatment of apoplexy includes two distinct objects; the one relating to that condition of the brain during the attack, which, if continuing long, would destroy life; the other to the secondary and less dangerous consequences of it. At present, therefore, considering only the immediate phenomena of the disease, namely, the loss of consciousness with which it begins, and the drowsiness, imperfection of the senses, and head-ache, which follow, we shall establish the principles of treatment required for the general congestion, hemorrhagic excitement, and the inflammation produced by the effused blood, reserving till afterwards the consideration of paralysis, the effect either of this coagulum, or of disorganization of the brain.

When an attack of apoplexy is recent, the immediate and copious abstraction of blood should be resorted to, whatever may be the degree of para-

lysis; this is alike necessary to prevent hemorrhage, if it has not already supervened, or if it has, to arrest its progress; and as success depends in a great measure on the promptitude with which we oppose the hemorrhagic impetus, it will be best to bleed from the arm, and even from both arms together, if the blood should run slowly.

The paleness of face and smallness of pulse which exist in the commencement of apoplexy, must not prevent our having recourse to bleeding, so long as the action of the heart maintains a certain degree of strength; since, on the one hand, a pallid hue generally accompanies severe cerebral congestion, while, on the other, we see the circulation gain energy in proportion as the brain becomes by the abstraction of blood relieved from the load which oppressed it.

If, after the first bleeding, the patient is still sunk in profound coma, with a full and regular pulse, we must repeat the operation, especially if we discover hypertrophy of the left side of the heart; in such a case indeed it would be advisable to open the jugular veins. The powers of the lancet should be aided by applying to the back of the neck leeches, followed by cupping glasses. The cerebral congestion, in the mean time, must be combated by cold water, or ice applied to the head, while revulsion to the lower limbs is established through the aid of sinapisms.

If an attack of apoplexy has occurred in consequence of the suppression of a hemorrhoidal or menstrual discharge, when immediate danger has been obviated by the lancet, the application of leeches to the vagina, the inner side of the thighs, or the anus, will often be sufficient to prevent a relapse.

As any delay may lead to fatal hemorrhage, or a tedious if not incurable palsy, nothing should deter

us from the abstraction of blood as soon as possible after the seizure, unless there should be such excessive collapse, or such prolonged syncope, as to threaten immediate death. In this case, the application of boiling water to the epigastrium, sinapisms to the feet, and dry cupping glasses to the nucha, or between the shoulders, together with the employment of irritating enemata, frictions with ammoniacal liniment, or aromatic tinctures, will be necessary to maintain the spark of life, when so near extinction.* In such cases, the happiest effects have often resulted from the internal use of musk, camphor, acetate of ammonia, cinchona. ether, and other diffusible stimulants; but the moment that the pulse regains its strength, and the skin its warmth, bleeding must be practised.

[In this, as in every other case of extreme congestion, that is, when the surface of the body is universally cold, and the pulse scarcely susceptible, there is probably no remedy so powerful as the hot air bath, which at the same time arouses the heart to action, and removes the accumulation of blood by which it and the other internal organs are oppressed.

[As there may be no better opportunity, I will here express my belief that in some at least of those most unhappy instances in which women shortly after delivery sink into a profound and fatal collapse, death might be averted by the *timely* application of the hot air bath. In cases of this description, the nervous system has sustained such a shock that the blood no longer flows through the capillaries of the surface: it consequently accumulates about the central organs

* Care must be taken to avoid narcotic substances, such, for instance, as tobacco, which, from their direct influence over the brain, would almost necessarily aggravate the coma.

of circulation, and the heart, sympathizing with the nervous system, and oppressed with its unusual load, ceases to act. The manner in which this condition is removed by heated air has been just stated, and is indeed obvious.]

If apoplexy occurs while the stomach is loaded with food, it is best to direct our earliest attention to the more dangerous disease, that is, the affection of the brain, and without delay to abstract blood, especially as this operation will often occasion vomiting, and thus accomplish both objects. The influence of a loaded stomach in producing apoplexy, especially in those advanced in life, is well known.

If, however, vomiting should not occur, it may be easily provoked by tickling the fauces with a feather; a plan always preferable to the use of emetics, being free from the danger of exciting inflammation in the stomach, or, which is no less to be dreaded, of augmenting, by reiterated efforts to vomit, that cerebral congestion which it is our great object to diminish; we may besides order soothing drinks, and simple or purgative injections, so as to evacuate the intestinal canal more speedily.

In each of these instances we must be careful not to neglect the state of the bladder, but to assure ourselves that the patient passes his urine freely; otherwise, when there is paralysis of this organ, its contents may remain and accumulate until inflammation is excited; besides, the absorption of the urine produces most serious symptoms.

After the patient has perfectly regained his consciousness through the use of the lancet, we must still recur to it so long as the intellectual faculties, speech, or any of the senses, remain imperfect; and if any pain in the head, however little, remains, (provided the patient be strong and not very old,) it will be prudent even a third time to abstract blood; and if, after all, some symptoms of cerebral irritation

should persist, the application of a few leeches to the anus, or behind the ears, will be advisable.

When, on the contrary, an attack of apoplexy has been slight, and the intellectual powers not much affected, if the patient makes no complaint either of stunning noises, uncomfortable sensations, or pain in his head, if the disease is confined to simple congestion or very limited paralysis, as of one eyelid, the mouth, an arm, or leg, or merely of the tongue, we may be satisfied with one copious bleeding, followed by purgative injections, aperients, foot-baths, and low diet.

If, after an attack, characterized by sudden paralysis of one of the extremities, the paralysis should leave this extremity and fasten on another, very active treatment will be necessary, such as general bleeding, repeated twice or thrice at short intervals, with the application of ice to the head, and blisters to the lower limbs.

But when, notwithstanding the measures here indicated, the half paralyzed limb experiences acute pain, and becomes the seat of a muscular rigidity which has not previously existed, and when to these symptoms are added head-ache and fever, (two evidences of inflammation in the brain,) it is necessary, if the condition of the patient prohibits further loss of blood, and the cerebral affections gain strength, to employ cold applications to the head, tepid affusion, blisters to the thighs, and purgative injections, and in addition, provided that the stomach offers no sign of irritation, to have recourse even to diffusible stimulants and drastic purgatives, in large quantities, the co-existence of apoplexy and cephalitis being almost beyond the influence of art.

Apoplexy occurring in persons habitually subject to rheumatism, does not admit of bleeding in the opinion of some, and especially of Professor Récamier, who has several times observed loss of blood in such

cases aggravate the cerebral congestion: it is by diffusible stimulants and sudorifics, as ether, tincture of cinchona, and the spirit of mindererus, by sinapisms and aromatic fumigations applied to the lower limbs, that this physician attempts to arrest the progress of paralysis, and hasten its cure.

When apoplexy appears after the retrocession of gout, it requires, first of all, the application of local irritants to the place which the gout occupied: in other respects, the treatment must be the same as in other cases.

After having thus provided against the first and most serious effects of this disease, the patient should be directed to take cooling and laxative fluids; such as whey, infusion of senna, and the solution of cream of tartar: the strictest regulation of diet must be enforced, as long as any traces of cerebral disorder remain, and until all danger of inflammation from the presence of a coagulum of blood has passed away. Then only will it be safe to attempt to hasten the return of motility and sensibility to the paralyzed part.

Although it may be justly laid down as a general principle, that paralysis is recovered from only by time, the duration of which is dependent on the absorption of the blood extravasated in the brain; yet our knowledge of the various organic conditions which may give rise to palsy, is too limited to authorize our rejection of every plan of treatment: and as it has been proved by numerous facts, that very trifling paralysis may follow copious effusion, while, on the other hand, an inconsiderable hemorrhage will occasion complete and very obstinate paraplegia; and when we consider, that loss of motion, and even of sensation, after having long existed, sometimes disappears rapidly under the use of remedies, although we can discover nothing unusual in the seat or nature of the disease to explain the anomaly;

it is certainly proper to try any plan which experience has shown to be useful. Of all of these we will now take a general review.

When the loss of sensation is incomplete, it is common to hear the patient complain of sharp pains, or a disagreeable feeling of numbness, along the affected limb. In such cases, most decided benefit and often even the entire removal of these sensations, follows the application of a blister near the origin of the surrounding nerves.

Among other remedies, galvanism may be mentioned as one of the most valuable; not only on account of its energy, but from its safety and the facility of its application, as well as because the practitioner is able to regulate its intensity, and the direction of its influence. To derive from it the effect we desire, there must be only a partial loss of the power of motion, and none of sensation, otherwise success is very doubtful; although, even in such instances, it has sometimes occurred. Dr. Andrieux, who has had much experience on this point, has never found that galvanism occasioned uneasiness in the head, or too much excited the brain: he applies one of the wires (from the zinc end) to the cervical or lumbar region, over the transverse processes of the paralyzed side, while he puts the other (from the copper extremity,) into a basin of acidulated water, in which the patient places the affected limb.

We may also aid in restoring to the limb its lost sensation or motion, by the application of moxa in the course of the principal nerves which supply it, the insertion of a seton, cupping, and blistering. As to frictions with tincture of cantharides, volatile liniments, &c. they are of little or no use.

When difficulty of motion is owing to nothing but the stiffness occasioned by want of use, douching the affected limb will be very useful; we must, how-

ever, take care not to employ too much water, and to have it warm, lest it should occasion congestion within the brain.

The use of strychnine, and the nux vomica, which has been lately recommended in paralysis, should be restricted to a very few cases, or rather entirely abandoned; for the spasmodic actions excited in a paralyzed limb by these substances, appear to arise from inflammation of the brain, an event always formidable in apoplexy; besides, as we have often no control over their action, it is scarcely prudent to have recourse to them.

Nearly the same may be said of tartarized antimony, the dose of which has been pushed even to sixty or seventy grains in the day, in the hope of overcoming the paralysis. But it is scarcely warrantable to expose a patient to so dangerous and doubtful a remedy, especially as life is in no degree involved in the continuance of the disease.

The paralysis arising from a species of *Neuralgia*, the phenomena of which resemble apoplexy, will be spoken of under that word.

The prophylactic treatment of apoplexy, though highly important, is little under the control of the physician, and if it were, would not always be effectual: however, we may lay down the following rules, to which every one who is very stout, has a great head, short neck, and largely developed heart, should submit:—his diet should be light, with very little allowance of wine, and none of alcoholic liquors: he must attend to the regular action of his bowels, and keep up all the discharges, natural or accidental, to which he may be subject; his head should be lightly covered: lastly, he should avoid hot baths, and be cautious of remaining long exposed to the sun, or heated rooms, which always dispose to cerebral congestion. If either of his parents has fallen a victim to apoplexy, and he is

above fifty years old, or has had occasional sensations of numbness, these precautions are doubly imperative.

[The following is an analysis of the treatment of apoplexy recommended by Dr. Abercrombie, one of our latest and best writers on the subject.

As soon as possible after the abstraction of blood, our first great object, means are to be taken for inducing active purging, as an essential part of the treatment: these measures, together with the application of cold water, directed in a continued stream against the crown of the head, an elevated position of the body, and exposure to a fresh air, are generally sufficient to effect the removal of the apoplectic state.

Weakness of the pulse and paleness of the countenance do not at all contra-indicate venesection; [but if the pulse does not rise while the blood is flowing, the arm should be bound up before much has been lost, otherwise the patient may sink into a state of irrecoverable collapse. Bearing in mind this criterion, it will generally be safe to employ the lancet.]

The exhibition of emetics in the early stage of apoplexy, is hazardous, and would probably be injurious; but when the system has been reduced by evacuations, and some degree of coma continues, a mild emetic may be very useful. Nearly the same observations apply to stimulants, which may, if necessary, be given with comparative safety, after copious depletion.

In the restoration of paralytic limbs, stimulants are often beneficial, but they must be used with caution: keeping the general system, at the same time, low, is an important precaution.]

ENCEPHALITIS.

As long as the symptoms of disorder in the head amount to nothing more than those of determination of blood, or when there is only the coincidence of a slight disturbance of the intellectual and sensorial function, with fever, to make us suspect the existence of encephalitis, its treatment should be in every respect that of the first stage of arachnitis; for, at this period, it is quite impossible to distinguish these two inflammations from each other. We may begin by venesection, or the application of leeches behind the ears, or to the neck or temples; affixing cupping glasses over the punctures, as soon as the leeches relinquish their hold. The quantity of blood to be abstracted by the lancet, must be regulated by the intensity of the cerebral and febrile symptoms, the strength and age of the patient, and above all, by the favourable or unfavourable effect of previous evacuations. Along with the abstraction of blood, cold applications to the head, and hot irritating pediluvia, should be made use of; during the paroxysms it will be proper to employ the warm bath, or cold affusions directed over the whole body, unless the chest is affected; in which case they must be confined to the head.

But if, notwithstanding, the encephalitis still advances, a thing very uncommon, and if the symptoms characteristic of the second stage, or a lesion of the structure of the brain, appear; that is, if contraction, stiffness, or spasm, whether continued or intermittent, attacks the muscles of either of the extremities, or of the face, we must persevere in the application of refrigerants to the head, and repeat the operation of bleeding, especially from the jugular vein.

These measures must be vigorously pursued

unless the pulse is extremely feeble, and the surface of the body cold and pallid, when sinapisms must be applied to the feet, with blisters to the neck or thighs. So imminent is the danger, that we must arm ourselves with all the powers of our art to contend against it.

When we have fulfilled this first indication, namely, to divert the rush of blood from the seat of inflammation, we may act upon the bowels by laxatives, or purgative enemata, unless the disease has either arisen from, or seems likely to be accompanied by inflammation of the intestinal canal. Whenever inflammation exists within the abdomen, it is necessary to introduce the catheter now and then.

If the patient's countenance is pale, the pain in his head permanent, and his pulse languid, while he gets increasingly comatose and feeble, under an antiphlogistic plan of treatment, we must abandon it, and content ourselves with the employment of warm baths, and occasional cold affusions; giving internally three or four grains of musk every hour, with camphor, ether, bark, &c. ; rubbing aromatic tinctures over the surface, and lastly, with keeping up life by the application of dry cupping glasses, sinapisms and blisters.

When the period of cerebral irritation has quite passed away, and paralysis of the muscles is succeeded by rigidity or spasm, it is time to leave off antiphlogistic measures.

If the patient is sunk into a state of such profound coma, that all his intellectual powers seem lost, and the only effect of febrile reaction is a greater frequency and irregularity of the pulse, with diminished heat of the surface; in a word, if the collapse is general, tonics, diffusible stimulants, as ether or wine, acetate of ammonia, camphor, musk, castor, bark, &c. may be successively employed; and lastly, counter-irritants to the skin: but there can be very little reasonable expectation of success.

If, on the contrary, as the inflammation recedes, the mental faculties return, the pulse at the same time becoming less frequent, the head-ache slight, and the affected limb gradually regaining its sensibility, the case is analogous to that of the paralysis after apoplexy, which we have already described. Galvanism, the application of blisters, dry cupping glasses, and moxa, in the course of the principal nerves supplying the affected limb, puncturing the brain, if the disease has come on after a fracture of the skull, and there seems little reason to doubt that the paralysis depends on a collection of pus in a spot, the exact situation of which can be foretold: the application of a large blister, rubbing in tartar-emetic ointment over the hairy scalp, the insertion of an issue near the suspected seat of effusion,—these are the means to which we may have recourse.

As to the encephalitis which arises round scirrhous or tubercular tumours in the brain, it is seldom possible to arrest its progress; it must be treated as idiopathic inflammation, and a constant drain must be kept up.

The patient in general should drink nothing stronger than barley water or whey, while the acute stage of inflammation lasts.

SOFTENING OF THE BRAIN.

After the minute details into which we have entered on the treatment of the preceding diseases, namely, encephalitis, arachnitis and apoplexy, we need not be detained long in considering that of Softening of the Brain: besides, its existence is marked by no evident symptoms, until paralysis

comes on, and then it cannot be distinguished from phrenitis; and if the diagnosis were possible, it would have no influence over our treatment, which must be regulated by, and vary with, the concomitant phenomena; thus, antiphlogistic and refrigerating remedies will be necessary, during the period of stimulation and reaction; cold affusion and bathing, on the recurrence of a paroxysm; and the application of counter-irritants to the skin, after the fever has given way to venesection or leeches; tonics, stimulants, or purgative injections, when the softening is in an advanced stage, or the age and general condition of the patient prohibit any further loss of blood; a negative treatment, if the disease is stationary: and, lastly, escharotics, moxa, or galvanism in the course of the nerves, after paralysis has come on.

EPILEPSY.

Recent epilepsy, existing in a young robust subject, who is otherwise enjoying good health, must be attacked by blood-letting in the intervals between the fits, or before their accession, if any precursory symptom, such as head-ache or giddiness, warns the patient of their approach.

When epilepsy follows the repression of any eruption, drain, or sanguineous discharge, as menstruation, epistaxis, piles, or an habitual bleeding, we must either re-establish them, or supply their place by blisters, escharotics, leeches to the anus, vagina, nostrils, &c. or by resuming the habitual venesection. In this last case, especially, an issue should be inserted in the arm, for bleeding often favours plethora, and aggravates cerebral congestions, as

scon as we suspend or relax the severity of our antiphlogistic treatment.

If the circulating system is largely developed, with a tendency to hypertrophy of the heart, considerable benefit may be derived from the employment of digitalis, or prussic acid, and the addition of nitre to the ordinary beverage.

If the patient is weak, delicate, and irritable, and the disease appears to be dependent on the condition of the nervous system, we must endeavour, by cold affusions and bathing, and by habits of regular moderate exercise, to develop the muscular system, so that it may predominate over the nervous: in cases of this description, tonics, bitters, and a nourishing diet, should be recommended.

When the fits of epilepsy are preceded by the *aura epileptica*, the cause of which may be some local irritation, as, for instance, the pain of a ganglion pressing on a nerve. dyspeptic uneasiness, or a carious tooth—it is necessary, before an epileptic habit has become established, to remove this local cause, by cutting the nerve above the place at which the *aura* commences, by applying counter-irritants, leeches to the epigastrium, and by extracting the decayed tooth, &c.

However proper may be the treatment which we have just described, it too often happens, notwithstanding, that the disease continues, especially if the patient is hereditarily predisposed to it, and is above fourteen years of age: hence it is necessary to enumerate the various remedies which have been proposed, although their success has seldom justified their reputation.

In the first place, we may mention cold affusions, the powder or infusion of valerian, which has been employed in doses, of two drachms up to one or two ounces, every day; assafœtida in large quantities, camphor, the oxide of zinc, castor, musk, opium.

Dippel's animal oil, oil of turpentine, galvanism, digitalis, hellebore, mugwort, recommended by Burdach and Hufeland, in doses of fifteen or sixteen grains, half an hour before the accession of a fit; extract of hyosciamus, stramonium, stavesacre seeds, gum-resinous purgatives, and, lastly, mercury; especially if the patient has previously laboured under syphilis, which has not been thoroughly cured.

There is a second class of medicines, so violent and dangerous, as to require, on the part of the practitioner, the utmost caution in their use; we may mention, as instances, the acetate of lead, nuxvomica, arsenic and its preparations, phosphorus, which should never be used but in the minutest doses at first, and lastly, the nitrate of silver, the dying effect of which on the skin, is not the only objection to its employment; however, when combined with a vegetable extract, according to the plan of Sementini, it appears, from the observations of Baillie, Brera, and Kruger, much less apt to excite those violent inflammations which make the employment of this substance so extremely formidable.

We may employ, either as secondary to the means above indicated, or as our principal treatment, dry cupping, the application of escharotics along the vertebral column, rubbing the head with ammoniacal ointment, putting a blister, like a bracelet, round the limb above the spot at which the aura epileptica begins, daily friction of the abdomen or extremities with a tartar-emetic ointment, consisting, according to the formula of Dr. Peysson, of a scruple of the salt with an ounce of lard.

Whatever may be, in other respects, the course which we adopt, it will always be requisite to remove, or lessen the causes which hasten the recurrence of the fits; such as a too abundant and too rich diet, spiritous liquors, the abuse of venery, too rigorous a continence, residence in a hot or im-

pure atmosphere, constipation, long continued mental exertion, or violent emotions of the mind.

In some cases, certainly, epilepsy has been successfully treated by attacking a fit during its crisis: of this nature is a case in which vomiting always attended each attack, which was cured by the employment of emetics; also, another related by Dumas, in which bark was equally effectual; in this instance, Dumas availed himself of a peculiar effect of punch, in developing and rendering periodical the epilepsy to which his patient was subject, and over which he had, by this means, easier control.

An attack may occasionally be prevented, or at least put off, by the inhalation of some very powerful odour; it is therefore proper to recommend those who are subject to this terrible malady, to carry about with them a bottle of strong volatile salts: this is particularly useful when the fits commence with an *aura*; in this last case, placing a ligature, or making strong pressure above the origin of it, is still more serviceable. Compression of the carotids, as soon as the fit begins, has cut it short, and eventually cured the disease, according to H. Earle, Dr. Brown, and Dr. Reid, (see Transactions of the Irish College of Physicians,) have suspended the fit, by forcibly pressing upon the epigastrium. The latter of these gentlemen has also completely put an end to attacks of epilepsy, by forcibly extending the limbs and fingers of his patients.

During the continuance of a fit, the patient should be laid on a mattress, and every thing with which he might injure himself, removed out of the way: it is also necessary to keep open the mouth with a pledget of linen, to prevent him from biting his tongue or lips.

When the fit is very severe, and leaves either the intellectual, motive, or sensorial faculties disordered, it will be necessary to abstract blood from a vein, or,

if the patient's debility prohibits this, the application of leeches behind the ears, or to the anus, may be substituted, and for some days afterwards we should direct the use of the cold affusion.

[Dr. Baillie, after recommending the use of the nitrate of silver and purgatives, gives the following short directions for the management of an epileptic patient. "He should live very temperately, and avoid every thing which may tend to excite or harass the mind; he should eat animal food sparingly, abstaining altogether from wine, ale, &c. The hair should be cut short, and cold applied to the head whenever the surface of it feels hot."]

HYSTERIA.

The treatment of hysteria will be different, according as it originates from an unnatural predominance of the uterine system, or from an excessive irritability of the brain and nervous system, which secondarily re-acts upon the uterus, more powerfully than upon other organs.

In the first case, leeches should be applied to the vagina, or the inner side of the thighs, especially if the menstrual discharge is scanty, or suppressed; together with hip baths and fumigations of assafœtida, or aromatic vapours directed towards the uterus at the periods of menstruation, and the use of demulcents: if hysteria depends on a bad habit, a few grains of camphor may be given at night, and the patient must not be allowed to go to bed until fatigued by exercise, or to lie long in it; if all these means fail, marriage may be recommended.

In the second species of hysteria, the most suitable remedies are muscular exercise, according to the patient's strength, regular manual and mental employ-

ment, bathing, cold affusions, (two measures which often have the effect of re-establishing the menstrual discharge,) bark, the preparations of iron, bitters, and aromatics.

If the catamenia are scanty, or altogether deficient, while the patient is plethoric, and the heart's action greatly disturbed by the disease, the abstraction of blood from the arm will be advisable, together with cold bathing, the use of digitalis, or prussic acid, and such measures as divert the blood from the centre of the circulating system, towards the extremities.

When irritation of the stomach and bowels is connected with, or seems the source of hysteria, we should begin our treatment with leeches to the epigastrium, warm baths, and a light diet: and indeed, whatever source of irritation may exist, our earliest attention must be directed towards it, and its removal will frequently be followed by that of the nervous affection which it has excited. By acting on this principle, the writer succeeded in a very severe and obstinate case, which depended on facial neuralgia.

When hysteria follows the repression of any eruption, or old ulcer, the cure of ringworm, or the cessation of some habitual pain, &c. we must, in like manner, begin by causing its return, or substituting issues in its place.

If these measures fail, we may try, in succession, musk, castor, assafœtida, valerian, opium, belladonna, ether, amber, camphor, antimony, friction over the epigastrium with antimonial ointment, and especially cold affusions, the employment of which has often been successful in the most obstinate cases.

During a fit the patient's dress should be loosened, so that the circulation and respiration may be as little as possible embarrassed; cold water should be sprinkled or rather dashed over the face, the body laid in a recumbent position, with the head elevated,

and a current of air admitted into the apartment. She should be made to drink some aromatic water, with ether, and the attendants may be employed in rubbing the temples, abdomen and extremities with ether; or if that is not effectual, and the case is urgent, cold affusion may be resorted to, care being taken to put the patient afterwards in a warm bed.

If, in the course of, or after a fit, threatenings of severe cerebral congestion ensue, it will be proper to open a vein, or apply leeches, as it may happen, and order the feet to be placed in hot water: but if the faintness and coldness of the skin are so extreme as to excite fear of a fatal issue, a contrary plan must be pursued, namely, the application of sinapisms, and dry cupping glasses to the abdomen, frictions of volatile liniment, the internal use of diffusible stimulants, as ether and aromatic tinctures, and lastly, of irritating injections.

[Hysteria being a physical disorder, may require physical treatment; but moral remedies are most powerful, and in a large proportion of cases sufficient, by opposing the morbid state of mind on which hysteria generally depends. Thus, by threatening, not as a punishment, but as a remedy, some very painful or disagreeable measure, withholding every expression of sympathy, and, on the contrary, making the patient feel that she appears to her friends foolish and ridiculous, the fit, in many cases, will soon go off, and never return. The practitioner must not, however, inconsiderately, and in all circumstances, pursue this mode of conduct, otherwise he may be guilty of the greatest inhumanity.]

CHOREA.

This disease generally occurs in young persons, and often ceases at the time of puberty; in undertaking the cure of it, the physician should first ascertain whether it arises from any injury of the brain, or spinal marrow.

If there is no evidence of inflammation in these organs, or in the alimentary canal, or of the presence of intestinal worms, and if, which very rarely happens, menstruation is regular, cold bathing and affusion will almost certainly be sufficient to effect a cure, when the disease is recent: but, should they, on the contrary, fail, we may try, one after another, assafœtida, musk, castor, opium, galvanism, camphor, valerian, belladonna, Dippel's oil, and other antispasmodics.

When chorea has an intermittent character, it should be combatted by bark, or some other of its preparations.

Chorea often accompanies hysteria, as one of its most prominent symptoms; and, in such instances, must of course be treated like it. In an instance which came under the observation of the writer, it followed epilepsy.* It is better in such a case to do nothing, for a considerable time at least, lest we should bring back the original and more formidable disease.

[According to Dr. Hamilton, purgatives will almost infallibly cure chorea; no medicines, probably, are equally useful in this disease, yet in some cases they fail, although fairly tried. Numerous cases have been published, illustrative of the great efficacy of arsenic; and the sub-carbonate of iron appears scarcely less powerful.]

* See the *Revue Medicale*, Vol. IV. page 9.

CATALEPSY.

If catalepsy is accompanied with sopor, so as to indicate congestion in the brain, it is prudent to abstract blood, either by leeches or the lancet, and at the same time, to order cold applications to the head, and counter-irritants to the feet.

When assured of the reality of the disease, we may attempt to cut it short, or prevent the return of it, by the application of cupping glasses, simple or armed, to the nucha, sternum, or epigastrium, by cold affusion, flagellation of the extremities, tying ligatures round them, or covering them with sinapisms.

Should respiration be so slow as to threaten death, it has been recommended to inflate the lungs artificially, as in asthma ; but it appears to us from numerous experiments on the power of galvanism over the action of the heart and lungs, that the voltaic pile would answer this purpose more effectually, one of the wires being placed against the spinal column, and the other over the stomach.

In the intervals between the paroxysms, cold or tepid bathing and affusion should be employed, together with antispasmodics, such as assafoetida and ether, unless such medicines seem to injure the digestive canal ; lastly, we should prescribe anthelmintics, if the disease appears to arise from worms, and, if the attacks are periodical, cinchona.

HYPOCHONDRIASIS.

This disease is certainly one of the *opprobria* of medicine ; and if, as is generally thought, its phenomena originate in some disordered condition of

the digestive organs, it must be confessed, that the ordinary antiphlogistic plan, according to which gastro-intestinal affections are treated, is very unsuccessful; otherwise we should not be so continually teased with incurable hypochondriacs. But, in truth, hypochondriasis does not consist merely in dyspepsia; the brain and nervous system take an important part in its formation; and hence, it is always necessary to diminish nervous irritability, at the same time that we correct the disordered functions of the abdominal viscera. Moreover, other organs than any of these, may be the original seat of hypochondriasis; thus, pulmonary consumption is frequently its unsuspected cause. We ought, therefore, to investigate the state of each organ, before entering upon any plan of treatment; this precaution would enable us to avoid many serious errors; we should not, for instance, as often occurs from the neglect of it, aggravate a chronic gastritis, and hurry the patient into a state of organic disease by means of stimulants, to the use of which we are tempted to resort, for the sake of the temporary alleviation which they afford.

Whenever there appears to exist any congestion of the brain, lungs or heart, it should be attacked by venesection, unless a tendency to piles makes it preferable to apply leeches to the anus; and, indeed, the determining of blood towards this part of the body, is of acknowledged utility in hypochondriasis. We must second the effect of bleeding by a bland diet, and the habitual employment of hot pediluvia.

If the most prominent of the morbid sensations of which the hypochondriac complains, appear to be seated in the digestive organs, he must be very particular respecting diet, carefully selecting his food, as his own experience has taught him, always excepting stimulants, even if he should think them safe or beneficial; and the quantity must not be

greater than what the stomach can easily digest; regular exercise, as walking, riding on horseback, and swimming, should be recommended; and, in fact, whatever has a tendency to maintain the general strength: lastly, if the patient presents evident signs of chronic abdominal inflammation, or is approaching the period of life, in which organic diseases of the abdominal viscera are most frequent, it will be proper to insert an issue in the arm, or in the vicinity of the organ which we suspect to be labouring under disease. This precaution becomes an absolute necessity, when any ancestor of the patient has died from any organic complaint.

In general, it is not advisable to continue a mucilaginous slop diet very long, as the stomach gets weaker and weaker under it, and the system falls into a state of debility, which is sure to aggravate the hypochondriacal symptoms: it is much better to pass on after a time, to the employment of bitters and aromatics, as the infusion of gentian or camomile, mineral waters, as those of Vichy and Spa, and a milk diet. In some instances of hypochondriasis, we have known the employment of bark, a little rhubarb taken before meals, and a few spoonfuls of wine in broth, perfectly restore the power of digestion, and dissipate obstinate local pains, the nature and precise seat of which it had been impossible to ascertain: wearing a rather tight belt round the waist has answered the same purpose; also the application of a blister, which should be placed in the neighbourhood of the pain, or kept up for some time at the epigastrium: frictions of antimonial ointment over this region, have been followed by equally happy results.

The eructations with which hypochondriacs are so frequently troubled, are often prevented, unless they depend on scirrhus of the stomach, by a glass of cold water or an ice after meals; or by the submi-

trate of bismuth, in doses of four or six grains, and the carbonate of lime or magnesia, a little before.

Flatulence may be remedied by taking mint or orange-flower water, and powdered charcoal, with bark; by applying wet cloths over the abdomen and wearing a belt, and by injections of cold water.

Constipation should be obviated by drinking whey and veal broth, the use of aperient enemata, and of neutral salts, which occasion less developement of gas than vegetable aperients.

When the phenomena of hypochondriasis occur chiefly in the thoracic viscera, that is, when the patient complains of a sense of strangulation, of palpitations, globus hystericus, asthma, suffocation, yawning, faintness, &c., and no organic disease of the heart or lungs can be detected, we may give assafoetida, either by the mouth or rectum, musk, castor, digitalis, ether, valerian, extract of hyosciamus, oxide of zinc, carbonate of iron and chinchona, ordering at the same time, cold baths and affusions.

If hypochondriasis consists principally in mental hallucination, so that the patient is wholly under the influence of some false notion, the first thing to be done is to divert the attention by travelling, and every variety of corporeal exercise, as swimming, riding, gardening, &c. It has sometimes proved beneficial to excite in the mind of the hypochondriac some lively emotion, or suddenly arouse him from his train of thought by exposing him in appearance to imminent danger. We must not avail ourselves of any remedies which act by stimulating the digestive organs, or, eventually, there will be two diseases to cure instead of one.

When excessive irritability is the sole cause of hypochondriasis, as in the victims of the venereal passions, cold bathing and affusions, abandoning vicious habits, marriage, and exercise, should be

recommended, and, as soon as the patient is well enough, scientific and literary pursuits.

Lastly, the physician must ascertain the idiosyncrasies of his patient, endeavour to trace out the source of the disease, and modify its treatment accordingly; for it may in one case arise from a suppressed discharge, and in another purely from moral causes.

MANIA.

If the patient is plethoric, we should first abstract blood from the arm, and afterwards apply leeches to the head, if there are signs of great congestion in the brain; at the same time, the head is to be kept cool by wet cloths, the feet immersed in hot water impregnated with some irritating substance, and the bowels evacuated by mild injections; we may next apply blisters to the inferior extremities, taking care to keep them open; lastly if necessary, setons, and the various counter-irritants about the occiput, together with the exhibition of strong purgatives, by the mouth or rectum, cold bathing and affusions, and, especially, douching, may be resorted to.

In general, maniacal patients should be subjected to a milk or vegetable diet, and in very moderate quantity, otherwise dyspepsia is very apt to ensue. They must be removed, as much as possible, from the influence of any source of mental irritation, and especially from those individuals whose presence keeps up their delirium. In all other respects they should be treated with indulgence, yet with firmness.

Regular bodily labour, as in gymnastic exercises, and cheerful company, conduce much to the cure of this disease.

Insane persons must be incessantly watched, as they frequently have a strong propensity to commit suicide, or to the horrible and most injurious habit of onanism.

Mental derangement, which is induced by the suppression of a discharge of blood, of a cutaneous eruption, or of any habitual emunctory, requires, as the basis of its treatment, the re-establishment of this supplementary yet natural function. When mania is a sequela of arachnitis, encephalitis, or gastro-enteritis, our treatment must be directed to the original disease.

The great tendency to relapse exhibited by persons who have once been attacked by this disease, especially if predisposed to it, will lead a prudent practitioner to recommend the habitual employment of escharotics, general or local bleeding, and purgatives, at each change of the seasons, or whenever any symptoms of cerebral congestion appear.

NIGHTMARE.

Employment of the mind, and a very early and light supper, or rather none at all, should be prescribed for this disorder. The patient must not retire to bed until he has exercised himself to fatigue; a glass of lemonade, or a spoonful of distilled aromatic water, may be taken before lying down, and the head must be elevated, on a hard horse-hair pillow. If the nightmare continues, tepid baths in the evening, or cold affusions, may be resorted to.

Lastly, if there exist signs of cerebral congestion, or of disease of the heart and large vessels, and the patient is plethoric, we may abstract blood from the arm, and apply leeches behind the ears, to the anus, or the præcordial region.

DISEASES OF THE SPINAL MARROW.

SPINAL ARACHNITIS.

FROM the very commencement of this disease, that is, as soon as the patient begins to complain of a sharp pain along the vertebral column, we must have recourse to venesection and the application of twenty or thirty leeches, with cupping glasses over the seat of uneasiness; favouring the action of these measures by refrigerating lotions along the spine, and by warm baths, provided that the motion which they occasion does not increase the patient's suffering; rubefacients and blisters may be applied to the upper or lower extremities, in the hope of diverting the spinal inflammation, and, lastly, it will be proper to stimulate the intestines by drastic purgatives, for in this disease there is much less danger of the coincidence of gastro-enteritis, than in inflammation of the brain; besides, if it were to be developed, its seriousness could not be put in competition with an attack of arachnitis.

These measures must be persevered in, as long as there exists any rigidity of the trunk, or the general and local symptoms indicate great excitement of the spinal marrow; but as soon as collapse supervenes, we must stop all antiphlogistic treatment, and strive, by administering injections of chinchona, musk and opium, and by the use of sinapisms, to prolong life, and bring about a happy termination.

If the disease has become chronic, and one of the limbs remains paralytic, either half stiff, or shaking with constant tremor, it will be proper to apply moxa, or some escharotic, in two or three places near the

transverse processes on the affected side, to galvanize the limb, and, if there is any local pain, to apply a blister in the course of the principal nerves supplying it. These means are preferable to hot baths, which are beneficial only when a long continuance of paralysis has brought on stiffness of the joints.

HYDRORACHITIS.

When hydrorachitis is externally visible, its treatment consists rather in preserving the tumour from the action of foreign bodies, than in attempting to hasten the absorption of the fluid in which the disease consists.

If hydrorachitis is occasioned by an affection of the spinal marrow, it is against this, that our remedial measures must be directed; and it is to the application of escharotics as near as possible to the seat of disease, that we must then have recourse; but if the serous or sanguineous effusion is the consequence of a wound or contusion of the spine, the inflammation which may exist must be treated in the usual way, and this will include all the means for producing absorption, which can be effectual.

[In the second volume of the *Med. Chir. Trans.*, Sir A. Cooper has described two modes of treatment, pursued by him in cases of spina bifida; the one palliative only, the other radical. The first consists in the application of pressure, by means of a truss; the second, in repeatedly puncturing the tumour with a needle, and exciting adhesion, and subsequently applying pressure. But there are many cases of hydrorachitis which do not admit of cure; these Sir A. Cooper has described in the following passage. "If the tumour is connected with an unnatural enlargement of the head, hydrocephalus is

conjoined with spina bifida, and the water will accumulate in the ventricles if the tumour in the loins is attempted either to be palliated or radically cured. If the lower extremities are paralytic, or the fæces and urine are discharged involuntarily, there is no hope of relief. If the tumour has burst at the time of birth, or bursts soon after, hydrocephalus will succeed.”]

INFLAMMATION AND SOFTENING OF THE SPINAL MARROW.

The cure, or rather the treatment, of this inflammation, is nearly the same as that of spinal arachnitis, namely, by venesection, leeching, and cupping, along the vertebral column, and the application of blisters and sinapisms to the extremities ; but the use of internal remedies, as drastics, purgatives, camphor, cinchona, is less effectual in myelitis, from the great tendency of the spinal marrow to disorganization ; when this inflammation has passed into a chronic state, we can only oppose it by establishing drains along the spine, and by the employment of counter-irritants, and galvanism.

DISEASES OF THE CHEST.

DISEASES OF THE AIR PASSAGES.

LARYNGITIS—TRACHITIS.

THE tendency of these inflammations to spread over the whole mucous surface of the air passages, and the readiness with which pulmonary congestion, or even pneumonia, is formed in such cases, renders it necessary, in the very beginning, to abstract blood from the arm, and immediately afterwards, unless the patient is extremely feeble, to apply fifteen or thirty leeches to the larynx or upper part of the trachea, promoting the flow of blood by means of cupping glasses.

In addition, it will be proper to cover the neck with emollient poultices, and employ hot pediluvia, frequent sinapisms, the inhalation of warm water, mucilaginous fluids, purgatives, injections, and opiate draughts. Lastly, absolute silence must be enjoined, and the temperature of the chamber be regularly maintained between 60 and 70 Farh.

After having thus subdued the most urgent symptoms, the throat or sternum, according as the larynx or trachea is the seat of inflammation, should be covered with a large blister, which is to be kept up as long as any traces of inflammation remain.

If these measures fail, and there is neither great febrile re-action nor inflammation in the alimentary canal, the practitioner may have recourse to an emetic, purgatives, and the repeated application of blisters to the extremities. But if the disease rapidly gains ground, and the danger is growing.

imminent, nothing but extreme exhaustion must be allowed to deter him from applying leeches to the throat, and acting on the bowels by drastic purgatives : if suffocation seems inevitable, tracheotomy must be performed.

When the inflammation is in a chronic stage, the employment of antimonial diaphoretics is indicated, together with mucilaginous and aromatic drinks, the insertion of an issue near the trachea, dry friction of the whole body, sulphureous waters, the habitual use of flannel next the skin, and of woollen stockings.

If every thing else fails, and the bowels are unaffected, drastic purgatives may be employed with safety and advantage, as was fully proved by Dr. Hamilton ; it is necessary, however, to watch their effects.

[Acute laryngitis, on account of the rapidity with which it runs its course, is an extremely dangerous affection, and will generally prove fatal, unless a most active and powerful treatment be pursued. Bleeding is so far from being sufficient, that Dr. Bailie doubted whether it aided the cure of this inflammation. After the copious abstraction of blood, Dr. Armstrong advises the exhibition of colchicum, which has a remarkable power in subduing the action of the heart, and inducing general relaxation. I have seen great benefit follow the use of calomel in very large doses. In the Med. Chir. Trans. vol. 6, Sir G. Blane strongly recommends covering the *whole surface of the thorax* with a blister.]

CROUP.

When the practitioner is called to a patient whom he suspects to have croup, he must not wait to

assure himself of it, but lose no time in arresting the progress of this frightful malady, for when once a false membrane is formed, the case is generally fatal.

The first thing to be done is, without doubt, to employ the common antiphlogistic remedies; but, to derive from them their full benefit, certain precautions are necessary.

If, then, croup is only in its first stage, a false membrane not having yet been formed, leeches should be applied to the throat, their number being regulated by the intensity of inflammation, the age and strength of the patient. We must not be afraid of abstracting blood copiously, for an attack of croup is sometimes dissipated at once by bleeding carried to syncope; however, a very feeble pulse, and pallid countenance, will remind us that it is time to stop. When the leeches have fallen off, cupping glasses should occupy their place, unless the dyspnœa is great; and lastly, an emollient poultice should be placed over the punctures.

In infants, local bleeding is generally sufficient to remove the cerebral and pulmonary congestions, which are so frequently complicated with croup; but when there is reason for believing that the bronchia, through their whole extent, are affected with inflammation, general bleeding should be practised.

In an incipient attack of croup in adults, however slight, venesection is always advisable; it should even be repeated two or three times, if the patient is strong, to be more certain of preventing the congestions which we have just spoken of, as the extension of inflammation to the trachea and bronchia, which is a thing not very uncommon in adults; afterwards the local affection may be treated by the frequent application of leeches.

In addition to these measures, a large blister should be placed on the *mucha*, and armed cup

ping glasses to the sternum, or between the shoulders; the feet or hands should be immersed in hot water, and sinapisms, and even blisters, unless the patient is too irritable, applied to the inferior extremities.

After having thus attacked croup in its first onset, we may seek the assistance of emetics, if our antiphlogistic measures have succeeded in preventing the formation of a false membrane; using, for this purpose, tartarized antimony, ipecacuanha, or, simply, titillation of the fauces with a feather, which will sometimes promote vomiting when other means fail. Emetics and nauseants, by increasing and altering the fluids which lubricate the mucous membrane of the throat and larynx, loosen the false membrane, and make its expulsion by vomiting much easier.

Some practitioners employ local bleeding, tartarized antimony, and emetic doses of oxymel of squill, all at one time; but our treatment should always be regulated by the general state of the patient, the intensity of reaction, and the effects of the remedies which have been already employed.

Other practitioners use embrocations to the throat, and touch the false membranes either with sulphuret of potash and honey, or honey and oxmuriatic acid, (three parts to one of acid,) or lastly, with a solution of the muriate of ammonia;* but, when the progress of the disease has not been arrested by all these measures, or the feebleness of the patient has prevented the employment of blood-letting early in the disease, when the pulse gets smaller and more rapid, and the general condition

* The only instrument necessary for this purpose is a thin slip of whalebone, to one end of which is attached a piece of sponge imbued with the wash; it should be squeezed before introducing it into the mouth, lest some of the liquid drop into the larynx.

of the patient more unfavourable, some benefit may be derived from blisters in front of the neck, mercurial frictions about the lower jaw, so as to excite a salutary salivation, and the exhibition of tartar emetic or of a grain of calomel every hour. In debilitated constitutions, where the inflammation assumes as it were a low type, the sulphuret of potash, given internally, has proved successful. It may be taken to the amount of some grains in sirup and coffee, or with opium; purgative injections are likewise very beneficial in these cases.

The decoction of senega, cinchona, &c. must not be employed till all danger is over, and the exhausted condition of the patient requires some support.

When croup arises in a very nervous and irritable habit, warm baths, camphor, musk, alone or combined with opium, assafœtida, and ether, will find their place either along with or after the use of antiphlogistic remedies.

Cases sometimes occur in which there are distinct remissions, with a total absence of fever; then it will be proper to prescribe belladonna or the tincture of opium, both of which, according to the observations of Gregory and Rush, have frequently been useful in such cases.

Throughout the disease, an equable mild temperature must be preserved in the sick chamber, and the air may be impregnated with emollient vapours; the patient should drink only mucilaginous fluids, and, to avoid relapses, it will be prudent to keep open one or two blisters in the extremities, as soon as convalescence is established.

Tracheotomy, in recommendation of which there is only one fact—the employment of galvanism, as proposed by Dr. Phœbus of Philadelphia—and blowing the powder of alum into the throat, through a wooden tube dilated in the middle to make room

for a kind of valve by which the return of the powder is prevented, need further observations to establish their utility. In regard to preservative measures, they consist of little more than taking care to avoid sudden changes of temperature, especially during epidemic catarrhs.

ÆDEMA OF THE GLOTTIS.

We may apply to this affection, with little addition, what has already been said of laryngitis, a disease to which it is intimately related.

As soon as the cause of suffocation is ascertained, we must promptly have recourse to the operation of laryngotomy, or what is better, introduce into the larynx a caoutchouc sound, of which the lower end is open, and, as much as possible, of the shape of the rima glottidis; this instrument has a secondary use in compressing the œdematous parts, but it is very difficult for the patient to endure the irritation excited by its presence, and then we may endeavour partially to supply its place by introducing the finger and thumb as far back as possible, and squeezing the infiltrated parts.

After having provided against suffocation by laryngotomy, or rather by use of the sound, we should blister the sides of the larynx, the nucha, or the inside of the thighs, and apply sinapisms to the feet, knees, or arms, at the same time giving internally an emetic every second hour, so as to provoke frequent vomiting, placing a large number of leeches about the neck, and frequently renewing them, unless the patient is extremely feeble, or the affection has come on during convalescence from some severe disease; lastly, the practitioner should act on the alimentary canal by purgative injections.

PULMONARY CATARRH.

When pulmonary catarrh is acute but not very violent, if taken care of early, it generally requires nothing more than the free use of slightly diaphoretic fluids, as common tea, sirup of capillaire, [which is prepared from the *Adiantum Capillus Veneris*, or Maiden Hair,] and the decoction of althæa, together with confinement to bed.

If these measures are not sufficient, we must next prescribe demulcent medicines, as coltsfoot, gum, &c. which allay the cough by lining the fauces, and thus sheathing them from the immediate contact of the external air.

A hot-water bath, or vapour bath, used immediately before going to bed, is extremely beneficial, even in severe cases, provided that the patient is careful to wrap himself well up in a flannel gown; we say as much of spiritous liquors, as punch and hot negus, taken in a moderate quantity. Many persons have been cured by this means, after they have been troubled a long time with catarrh. But it will be prudent to confine this plan of treatment to habits of languid irritability, and cases in which there is no danger of bringing on gastritis.

When, on the contrary, pulmonary catarrh is attended with fever, heat about the chest, embarrassed breathing, and very severe and frequent fits of coughing, the practitioner must not rest satisfied with these simple measures, but abstract blood from the arm, and even repeat the operation if the patient is young, vigorous, or plethoric. This active plan is necessary, not merely to cut short the catarrh, but to prevent pneumonia, and even phthisis, from supervening.

Where inflammation of the mucous membrane of the air passages is less intense, and the patient is

weak, very young, or has already been bled in the arm, leeches below each clavicle may be substituted; but it is a general principle applicable to all pulmonary affections, that general should be preferred to local bleeding.

The parenchyma of the lungs is too vascular, congestions of blood, however short a time they may remain, are too mischievous, and alterations of tissue too rapid, to allow the neglect of such a precaution.

Inflammation of the minute ramifications of the bronchia, the true suffocating catarrh, requires still more imperatively general bleeding; we must not be afraid to repeat it even four, five, or six times, if necessary to overcome the attack.

Indeed, such is the dangerous nature of this inflammation, that our only chance of success is in crushing it at its very commencement. Thus, an emetic at this period of the disease is often of the greatest benefit. Immediately after the first bleeding, blisters are to be applied to the inferior extremities, then upon both sides of the thorax, and if the least local pain remains, we must direct as many as fifteen or twenty leeches to the spot, affixing glasses over the punctures when the leeches have fallen off; the chest should be covered afterwards with hot cataplasms.

If, notwithstanding, the symptoms of inflammation continue with the same intensity, and the pulse retains its frequency, we think, from the numerous facts that have come under our own observation, that the practitioner should not hesitate, so long as there is any chance of success, to exhibit the tartarized antimony in large doses as a counter-stimulant, namely, to the amount of twelve or twenty grains in a mixture, containing also half an ounce of the syrup of poppies; a spoonful of this should be given every second hour, until the dyspnœa, fever, and other

symptoms, are decidedly improved; it is proper to diminish the dose as the patient improves.*

We may remark that in severe catarrh, and especially in the suffocating catarrh, of which we have just spoken, it occasionally happens that opium, while it calms the cough, increases the pulmonary congestion; in that case it is better to substitute for it the recent powder of belladonna, syrup of white poppies, or lactucarium.

In cases of catarrh, unless very severe, which occur in young children, and are unattended with fever, experience has shown that great benefit may be derived from emetics, given in small doses at near intervals. The emetic renders expectoration easier, supplies the absence of it, so common in children, and unloads the stomach of the mucosities which oppress it.

While attaching to emetics the value which they deserve, in the catarrh of young children, we must not forget how readily, at their period of life, the mucous membrane of the stomach and bowels becomes disorganized and softened; it is necessary, therefore, to avoid the exhibition of antimony, and select ipecacuanha, or what is perhaps better, to excite vomiting by titillation of the uvula. In old persons there is much less danger, and they may be useful by increasing the cutaneous perspiration, which is then very scanty. Gentle aperients, however, as manna, castor oil, rhubarb, are very beneficial in the treatment of catarrh occurring in early life, and should never be neglected. The application of blisters to the chest, sedative draughts, and the powder of belladonna, beginning with the eighth of a grain, may be tried, if other means fail.

[* See the Note on this subject, at the end of the Chapter on Pneumonia.]

When catarrh is chronic, and consists in a flow of viscid mucus, without fever or any indication of pulmonary congestion, the most suitable treatment is to apply several blisters over the chest, and prescribe decoctions of senega, lichen, &c., opiates to allay the fits of coughing, and, lastly, prussic acid, provided that there is no tendency to inflammation, otherwise the exhibition of the hydrocyanic acid would be likely to establish it.*

If these measures fail, we may try fumigations of tar, frequent inspiration of the ether of tolu, and sulphureous waters, especially if drunk at the springs, and used at the same time as baths.

Turpentine, the various balsams, &c., are often useful, diminishing expectoration, and rendering the breathing easier; the same may be said of the white oxide of antimony and sulphuret of potash, if given in very minute quantities.

Persons who are of a sluggish or an irritable habit, often derive great benefit from a plaster of Burgundy pitch, sprinkled over with tartarized antimony, and left on the chest as long as the patient can endure it. Rubbing in tartar emetic ointment is equally efficacious.

Sometimes, when there is no indication of organic disease in the lungs, the sputa, instead of being opaque and mucous, consist of a transparent, viscid, and frothy fluid: these cases are generally obstinate; we ought, therefore, without hesitation, to employ against them our most powerful remedies, as emetics, blisters to the chest, frictions over the whole body with oil, together with the internal exhibition of laudanum, opium, belladonna, prussic

* On the action of prussic acid in developing latent inflammation, see the excellent Memoir of Jacob Bouchenal, *on the Employment of Hydrocyanic Acid in Pulmonary Catarrh*; also a paper by myself on this subject, in the *Revue Medicale* for 1826, vol. iv. page 426.

acid, and if the cough returns periodically at night and morning, or after meals, and is accompanied with a sense of suffocation, the sedative medicines just enumerated should be regularly given in the intervals between the fits of coughing, and the patient confined to a low diet.

When catarrh is unattended with expectoration, the absence of which makes coughing very painful, tartar emetic ointment should be rubbed over the chest, and the extract of hyosciamus, belladonna, and opium, exhibited either internally, or through the skin deprived of its cuticle. Some practitioners give, in these cases, the sirup of poppies, in doses of a tea-spoonful at a time, draughts containing prussic acid, sulphuret of potash, alone or combined with almond confection, gum ammoniac, and, lastly, baths impregnated with sub-carbonate of potash.

Catarrh dependent on organic disease of the heart, requires, in addition to the remedies above enumerated, those which exert a beneficial influence on this organ. Thus, its too violent action should be opposed by digitalis, prussic acid, bathing, &c. and the circulation through the lungs relieved by the employment of the lancet.

It sometimes happens, that an attack of chronic catarrh resists every one of these measures. We must then investigate whether it does not arise from the suppression of some disease, as ringworm, herpes, tinea, hæmorrhoids, or an old ulcer, &c.; in such a case, it is generally sufficient to re-establish the repressed disorder, or, if that is impossible, to supply its place by an issue.

The prevention of catarrh is highly important, especially to persons who possess a weak constitution, or are in any way predisposed to pulmonary consumption: to such persons, a residence in a warm and temperate climate, wearing flannel next to the skin, and especially, keeping the feet warm and dry,

should be recommended. I have known several persons who had been habitually troubled with colds, every winter, entirely preserved from them by the simple precaution of using socks.

PERTUSSIS.

General bleeding in the commencement of this disease is seldom very beneficial, unless the patient is plethoric, has considerable fever, or complains of some local pain; and even then, we may often advantageously substitute for it, the application of eight or twelve leeches below the clavicles; in like manner, demulcent drinks are rarely of much use, and only allay irritation in a slight degree. On the contrary, it has been long observed, that emetics are much more efficacious in diminishing the violence of the fits of hooping cough; we would, therefore, recommend their frequent exhibition, especially at the commencement of the attack; always, however, keeping in view the state of the mucous membranes of the intestinal canal, so as to stop the vomiting, as soon as it seems attended with danger. After having, for about a fortnight, subjected the patient to the action of emetics, or even, at the same time, if the attack is very severe, we may endeavour to lessen the irritation of the throat, by the use of hyosciamus, opium, prussic acid, tincture of opium, one or two drops of which should be taken every second hour, and especially belladonna, in very small doses, gradually increased.

While these medicines are used internally, revulsion towards the surface is to be excited by external applications. Tartar-emetic ointment, employed according to the plan of Autenrieth, namely, by friction over the abdomen, has been frequently fol-

lowed by the happiest results: but it should not be forgotten, that this remedy is always painful, and yet frequently inefficacious, and sometimes even prejudicial: the application of this powerful medicine must never be left to the discretion of attendants, as children have been even poisoned by the inordinate use of antimonial ointment.

Blistering the chest has, in general, very little influence over pertussis, and should be avoided, unless acute pain, or some other symptom of inflammation in the lungs, renders it necessary.

Towards the termination of hooping cough, it is generally proper to prescribe tonics, as gentian, cinchona, rhubarb, senega, preparations of iron, and above all, friction, especially with oil, over the surface of the body, so as to restore the functions of the skin.

When pertussis assumes an intermittent character, sulphate of quina, bitters, &c. are indicated.

During the long period which hooping cough always occupies, it is prudent to examine the chest repeatedly, to prevent the formation of any disease in the heart or lungs. If any symptoms of cerebral congestion appear, they must be met by the abstraction of blood, either by leeches around the ears, or if the patient is plethoric, by the lancet.

The diet of the patient must be strictly regulated, and the quantity of food taken at once, very small: he must not stir out in the evening or in damp weather; he should wear dry and warm clothing, and, lastly, the place of his residence should possess a mild and equable temperature. (See also the preceding chapter on Pulmonary Catarrh.)

SUFFOCATING CATARRH.

The first thing to be done on an attack of dyspnoea, so violent as to threaten suffocation, is to investigate its cause. We have already considered most of the affections from which it may arise, as laryngitis, croup, œdema of the glottis, &c. and have only to describe the treatment of the sudden suppression of expectoration in chronic catarrh, which, occurring principally in old persons, gives rise to all the characteristic phenomena of this affection.

Vomiting, provoked by tartarized antimony, is one of the best means of re-establishing expectoration; oxymel of squills, ipecacuanha, acetate of ammonia, may be employed for the same purpose; in addition to which, dry cupping glasses should be applied to the chest, blisters to the legs, and sinapisms to the feet, while the bowels are unloaded by purgative injections.

Whenever the age and strength of the patient permit, it is prudent to make one copious bleeding, and even a second, if the first seems to have produced the least relief. Belladonna, prussic acid, and the extract of hyosciamus, are said to be extremely useful in relieving the distress occasioned by impeded respiration: assafœtida has been equally extolled, in doses of ℥ij up to ʒij, or of ʒij to ʒss. if given as a clyster. The inhalation of the vapour of ether has often been found very beneficial.

When this complaint attacks a phthisical patient, in consequence of the developement of acute inflammation in the last portion of the lungs left sound, it is in the highest degree alarming. Unless the patient is decidedly weak, blood must be drawn from a vein, and revulsion set up in the intestinal canal and skin.

When it is occasioned by the presence of a foreign body in the bronchia, the change of position of a calculus, or the vicinity of a tumour, the efforts of art are altogether futile, unless the cause of suffocation has its seat in the larynx, and can be removed by an operation. See also Diseases of the Heart, Asthma, Angina Pectoris.

PLEURODYNIA.

The remedy which should be first employed against pain in the parietes of the thorax, unconnected with inflammation of the pleura, is a hot cataplasm, composed of vinegar, linseed and mustard. If the pain is very severe, and resists this mode of treatment, it will be proper to apply twelve or twenty leeches to the side, and afterwards cupping glasses. Pleurodynia will generally yield to these conjoined measures, but if not, a blister will complete its removal. Diaphoretics, foot baths impregnated with mustard, and rest in bed, may be employed as auxiliary measures.

When pleurodynia has supervened on the cessation of gout in the feet, it will be necessary to bring back this last affection to its original seat, by the application of a sinapism.

An attack, occurring in a rheumatic habit, is often removed by vapour baths, sulphureous baths, and douches. Goupil has found acupuncture very beneficial in cases of this kind.

If the pains appear to be going on to a chronic state, the practitioner should make a most careful examination of his patient, to ascertain its precise seat; as obstinate pain in the side often arises from some unsuspected disease of the organs within the

thorax, of the ribs, or of the abdominal viscera; occasionally it depends on a syphilitic affection.

It is only after having thus ascertained the nature of pleurodynia, that we can prudently attempt its cure by narcotics, of which opium, hyocianus, and stramonium are, in such cases, the most valuable; or, lastly, by antisiphilitic medicines, according as it may arise from one or other of the causes above enumerated. See also *Pleuritis*, *Neuralgia*, *Rheumatism*.

PNEUMONIA.

If there are any established principles in medicine, the propriety of venesection in pneumonia is one: to derive from it, however, all the benefit which it is capable of affording, certain precautions, of which we are about to speak, must be attended to.

It must be practised in the earliest stage of the disease, as soon as dyspnœa, pain, and loss of sound in the chest, indicate its existence. The abstraction of blood should be made from a large orifice, especially at the first time, and continued until a large quantity is drawn, unless the attack is very slight, or the patient too young, old, or feeble, to bear much evacuation. The lancet should be frequently resorted to, as long as the pulse continues full or quick, the sputa streaked with blood, the natural sound of the thorax imperfect, the *râle crépitant* audible, and above all, as long as there remains the least embarrassment of respiration. The local pain may generally be removed by the application of leeches, followed by cupping glasses; and if the febrile and inflammatory symptoms are slight, by a blister.

When the inflammation and fever run high, blood-

letting may be repeated even four, five, or six times, but there is seldom occasion to carry it to this extent, especially as the treatment directed against the local pain will be sufficient to remove the inflammation, after its first violence has been subdued. It is almost superfluous to remark, that the stethoscope should be employed daily, to ascertain the condition of the lungs, and the effect of the remedies employed.

Neither the flow of the catamenia or of the lochia, nor old age nor infancy, should deter us from the general abstraction of blood; but if the attack is slight, any critical discharge, as from the rectum, or membrane of the nose, attended with an amelioration of the pulmonary symptoms, should modify our treatment.

Whenever there is much fever, venesection is indicated, though little disease should be detected on percussion and auscultation; for the fever may depend on inflammation in a portion of lung not accessible to these modes of investigation, on disease in some other organ, or on excessive irritability of the vascular system, any one of which causes would equally require the employment of antiphlogistic measures. In the last case, a warm bath might be very beneficial, especially if the dyspnœa is slight, and the sputa contain no blood: under its use the skin becomes soft, perspiration is established, and the disease often shortened. Where some irritation of the abdominal viscera is the cause of the febrile reaction, bathing is equally beneficial.*

* When bathing is prescribed in pleuropneumonia, the water should reach only to the epigastrium, the upper part of the body being carefully defended from the cold air, and kept warm; and the patient must not remain in more than half an hour.

Under certain circumstances, we must be particularly cautious in the employment of the lancet ; as, when the pulse is very small and feeble, or the debility and exhaustion of the patient great ; when bleeding has previously failed, or when it is evident that suppuration, especially if from vomitæ, has commenced.

Whenever the pulse is small, we should take care to examine the heart, to ascertain whether this arises from actual debility, or from mere oppression of strength ; for the heart's action may be full and powerful, while the pulse is scarcely perceptible ; in this case it becomes developed, as the blood flows, and after the operation has been once or twice performed, the pulse is large and soft. From this we may learn never to decide against the abstraction of blood, merely from the character of the pulsations at the radial artery ; a similar rule is applicable to other appearances of debility, which requires to be distinguished from the oppression of strength and stupor always attending intense inflammation.

In every doubtful case, as in old worn-out constitutions, we should abstract a small quantity, cautiously feeling our way ; and in determining whether to repeat the operation, a judicious practitioner will be guided not merely by the condition of the blood, but by the effect produced on the disease, and on the pulse.

The repeated application of blisters to the chest and inferior extremities, is generally indispensable in cases of this kind. When the first abstraction of blood fails to assist, and especially if it has seemed even to impede the progress of recovery, it would be openly opposing nature to have recourse to it a second time : under these circumstances, it is better to try an altogether different plan of treatment ; selecting, according to the state of the symptoms,

one or other of those which we are about to describe.

When pleuropneumonia is preceded and accompanied by bilious symptoms, without any decided evidence of abdominal inflammation; when experience of the prevailing epidemic has shown the utility of evacuating the primæ viæ, and when the symptoms of pulmonary inflammation exist only in a slight degree, we should, first of all, prescribe an emetic purgative, and continue or alter this plan of treatment, according to its effects. But if there appears to be great pulmonary congestion, with urgent dyspnœa and a full pulse, it is more prudent to defer the exhibition of an emetic, until after the abstraction of blood: in this species of pleuropneumonia, gentle aperients are very useful, towards the termination of the disease, and evidently aid in restoring the lung to its natural condition.

It sometimes happens, that pleuropneumonia, though treated by the antiphlogistic method, by bleeding, counter-irritants to the skin, and purgatives, does not disappear; dyspnœa, and pain in the chest remain, the sputa are expectorated in small quantity, and with much difficulty, and there is little febrile remission; in a word, some mysterious cause seems to obstruct the progress of the disease towards recovery. In some of these cases, the exhibition of twelve grains, or a scruple of camphor, musk, or castor, during the twenty-four hours, the free use of wine or bark, together with warm bathing and affusion, dissipate every unfavourable symptom, and, almost at once, restore the patient to a state of convalescence. Several instances of this kind have fallen under our own observation, some of which have been published in the *Revue Medicale*.

There is, moreover, another method of treating pneumonia, namely, by counter stimulation; this plan originated in Italy, and has been partially in-

troduced into France. Being convinced that tartarized antimony, the grand agent in this system, is indeed a most valuable remedy, when exhibited in large doses, I shall give the results which the experience of several years has taught one, as whom few are so well qualified to form an opinion.

The following extract is from the work of Laennec.

“As soon as I recognise the existence of the pneumonia, if the patient is in a state to bear venesection, I direct from eight to sixteen ounces of blood to be taken from the arm. I very rarely repeat the bleeding, except in the case of patients affected with disease of the heart, or threatened with apoplexy or some other internal congestion. More than once I have even effected very rapid cures of intense peripneumonies without bleeding at all; but, in common, I do not think it right to deprive myself of a means so powerful as venesection, except in cachectic or debilitated subjects. In this respect Rasori does the same. I regard blood-letting as a means of allaying, for a time, the violence of the inflammatory action, and giving time for the emetic tartar to act. Immediately after bleeding, I give one grain of the tartar emetic, dissolved in two ounces and a half of cold weak infusion of orange leaf, sweetened with half an ounce of sirup of marsh mallows or orange flowers, and this I repeat every second hour for six times; after which I leave the patient quiet for seven or eight hours, if the symptoms are not urgent, or if he experiences any inclination to sleep. But if the pneumonia has already made progress, or if the oppression is great, or the head affected, or if both lungs or one whole lung is attacked, I continue the medicine uninterruptedly, in the same dose, and after the same intervals, until there is an amendment, not only in the symptoms, but indicated also by the stethoscopic signs. Some-

times even, particularly when most of the above-mentioned unfavourable symptoms are combined. I increase the dose of tartar emetic to a grain and a half, two grains, or even two grains and a half, without increasing the quantity of the vehicle. Many patients bear the medicine without being either vomited or purged. Others, and indeed the greater number, vomit twice or thrice, and have five or six stools the first day; on the following days they have only slight evacuations, and often indeed have none at all. When once *tolerance* of the medicine (to use the expression of Rasori) is established, it even very frequently happens, that the patients are so much constipated as to require clysters to open the body. When the evacuations are continued to the second day, or when there is reason to fear, on the first, that the medicine will be borne with difficulty, I add to the six doses, to be taken in twenty-four hours, one or two ounces of the sirup of poppies. In general, the effect of tartar emetic is never more rapid or more efficient, than when it gives rise to no evacuation; sometimes, however, its salutary operation is accompanied by a general perspiration. Although copious purging and frequent vomiting are by no means desirable, on account of the debility, and the hurtful irritation of the intestinal canal which they may occasion, I have obtained remarkable cures in cases in which such evacuations had been very copious. I have met with very few cases of pneumonia where the patient could not bear the emetic tartar; and the few I have met with, occurred in my earliest trials; insomuch, that this result now appears to me to be attributable rather to the inexperience and want of confidence of the physician, than to the practice. I now frequently find, that a patient who bears only moderately six grains with the sirup of poppies, will bear nine perfectly well on the following day. At the end of twenty-four or

forty-eight hours at most, frequently even after two or three hours, we perceive a marked improvement in all the symptoms. As soon as we have obtained some amelioration, although but slight, we may be assured that the continuation of the remedy will effect complete resolution of the disease, without any fresh relapse; and it is in regard to this point more particularly, that the greatest practical difference between the emetic tartar and blood-letting consists. By the latter measure, we almost always obtain a diminution of the fever, of the oppression and the bloody expectoration, so as to lead both the patient and the attendants to believe that recovery is about to take place: after a few hours, however, the unfavourable symptoms return with fresh vigour; and the same scene is renewed, often five or six times, after as many successive venesections. On the other hand, I can state, that I have never witnessed these renewed attacks under the use of the tartar emetic.”*

Laennec is of opinion, that this method may be pursued at all periods of the disease; even after a large portion of the lung has undergone purulent infiltration: he calculates that the mortality under this system is about one in twenty-eight.

Throughout the acute stage of pleuropneumonia, the patient should be recommended to drink copiously of mucilaginous liquids, which may be acidulated, if there is any co-existence of bilious symptoms, and the cough does not seem aggravated in consequence. The patient should regularly take demulcent medicines, with sirup of poppies or laudanum; a warm temperature should be maintained in his chamber, especially during the night, and a very low diet must be strictly enjoined, not even broth being allowed while any degree of fever remains.

* Forbes' Translation of Laennec.

Towards the termination of the disease, if the patient does not regain his appetite, and the alimentary canal is unaffected, a little aperient medicine may be given with advantage ; it promotes the cure of pulmonary inflammation, and removes the cough, which is very apt to linger after the patient has become fairly convalescent.

Should any symptoms of relapse occur during convalescence, we must, without hesitation or delay, arrest its progress by a prompt recourse to the lancet, and not, by merely negative measures, suffer it uninterruptedly to pursue a course, the termination of which would probably be in an incurable phthisis.

In chronic pleuropneumonia, besides the use of mucilaginous and demulcent drinks, it is necessary to insert a seton or issue at the point of the chest, corresponding to the seat of disease in the lung, to apply numerous blisters, and to avoid every thing capable of exciting inflammation within the chest, as long conversation, fast walking, or riding on horseback ; a very light, and especially a milk diet, with total abstinence from wine, must be enjoined, even though there may be no fever : flannel should be worn over the whole body, to prevent the influence of variations of temperature, and the functions of the skin carefully maintained by frictions and sulphureous vapour baths. Whenever the circumstances of the patient put it in his power, he should select a residence enjoying a southern aspect, or what is still better, a warm and equable climate ; and on the least increase of inflammation, indicated by pain in the side and fever, we must recur to the abstraction of blood by the lancet, cupping glasses, or leeches. Lastly, to complete our description of the treatment of chronic pneumonia, it may be remarked, that much benefit is frequently derived from a repetition of emetics and drastic pur-

gatives, and the exhibition of tartarized antimony, according to the system of Rasori.

[It is difficult to believe that the exhibition of tartar emetic in the manner recommended by Laennec, can be devoid of danger; yet, the high moral and intellectual character of this great physician, forbids the unqualified rejection of his statements; moreover, in allusion to them, the late Dr. Cullen says, "I know them to be quite correct, from the testimony of English physicians, eye-witnesses of his practice." Tommasini asserts, that out of one hundred and fifteen cases of pneumonia, treated with the tartar emetic, (conjointly with bleeding, &c.) only fourteen died; and Dr. Forbes, who, as an English practitioner, will, probably, be considered a safer authority on this subject, says, "During the last two years, I have used the tartar emetic (after pretty copious venesection however) in a good many cases of pneumonia. In all, the termination was favourable. In no instance but one have I seen any bad effects from it; and, in this, it was incautiously administered without due reference to the co-existence of gastric irritation. The only objection to its use, appears to me to be the severity of its operation, previously to the establishment of *the tolerance.*"]

ŒDEMA OF THE LUNG.

Œdema of the lung, whether idiopathic, a sequela of measles, or co-existent with a general dropsy, requires the same treatment as this last disease, After having applied one or two blisters on each side of the chest, the whole surface of the body is to be rubbed over with the tincture of squill, digitalis,

or sulphuric ether, and fumigations with valerian, elder flowers, &c. made use of.

White wine may be recommended, and laxative drinks containing acetate of potash; an emetic, especially of ipecacuanha, should be occasionally prescribed, and expectoration promoted, by inhalations of ether, of tolu, or by the internal use of the acetate of ammonia, oxymel of squill, kermes berries, antimonial powder, &c.; the bowels must be kept open by aloes, rhubarb, jalap, ammoniacum, &c.

The treatment of œdema of the lungs, occurring after an attack of pneumonia, or dependent on organic disease of the heart and large vessels, is pointed out in the chapters on these affections.—See *Pneumonia*, &c.

GANGRENE OF THE LUNGS.

When gangrene of the lungs has attained to a certain extent, it is beyond the resources of art; and consequently our observations apply only to gangrene of a limited portion of the pulmonary tissue.

The treatment of this affection should depend altogether on the general condition of the patient: unless this principle is kept in view, we may fall into serious errors.

When gangrene of the lung occurs in a young person, of robust constitution, and previously in good health; when it has not arisen from any specific source, and is neither epidemic, nor connected with typhus, but appears simply as a sequela of pneumonia, either through the intensity of the inflammation, or some accidental modification of it, as, for instance, from extreme heat and when the pulse is full and resisting, the skin warm, the countenance

little altered, and, in a word, the general health and strength little impaired, we ought to try the experiment of taking away a little blood. If the blood is firm and florid, with a buffy surface, if the patient feels decidedly better, and his pulse become fuller, the antiphlogistic treatment may be continued. But if, on the contrary, the blood is flabby, of a greenish hue, and fetid odour, and no improvement in the symptoms has taken place, it will be well to pause before venesection has aggravated the evil, and have recourse to tonics, and the application of counter-irritants to the skin.

Every auxiliary measure ought to be sedulously adopted: a moderately warm atmosphere, impregnated with soothing and balsamic vapours, should be maintained in the chamber of the patient, who should inhale the ether of tolu, drink copiously of demulcents, alternately with a solution of the chloruret of soda, beginning with a very small dose, and gradually increasing it: tonics and expectorants are indicated, and when there is pain in the chest, dry cupping and blistering; hæmoptysis may be counteracted by nitre, combined with conserve of roses; lastly, the patient must avoid a horizontal posture, and if confined to his bed, should set up in it, especially in very hot weather, for lying on the back tends to produce stagnation of blood in the posterior part of the lungs, and sometimes evidently accelerates death.

In proportion as the patient improves, and the sputa lose their gangrenous hue and colour, we may more freely employ the ordinary means for giving tone to the system.

When extreme debility accompanies the symptoms of gangrene in the lung, and still more if it precedes them, and they succeed another affection, which has already produced great weakness, or seem to depend on the operation of some hurtful

cause, all the stimulating powers of art should be resorted to, as the exhibition of wine, camphor, musk, ether, decoction of senega root, and the seeds of the *Phellandrium Aquaticum*, and the application of sinapisms to the limbs: blisters are apt to occasion gangrene, and are consequently unsafe.

It is always proper to place some solution of the chloruret of soda near the bed of the patient.

HÆMOPTYSIS.

When hæmoptysis is slight, occurs in persons otherwise in good health, and consists simply in the expectoration of bloody sputa, without any other symptom, it may in general be easily checked by simple means. A small quantity of blood should be taken from the arm, and the patient's diet should be mucilaginous, acidulated, and slightly astringent liquids, as a decoction of coltsfoot or rice, containing a little alum, nitre, or prussic acid. These remedies will usually be sufficient, especially if an antiphlogistic regimen is observed; and the patient avoids much conversation and walking about.

But if the hemorrhage from the lungs increases, or has been from its commencement abundant, attended with a sense of heat in the chest, frequent cough, dyspnœa, together with a full and hard pulse, we must not be satisfied with a single abstraction of blood, but repeat it the next, or even on the same day, if the hemorrhage does not cease, and the pulse retains its fulness: then, after having fulfilled the most urgent indication, that of removing the congestion of the lungs, we must endeavour to provide against its return, by the application of cupping glasses to the thighs, by the internal exhibition of nitre in half ounce and ounce doses, in combination

with mucilage, by saline purgatives, bathing the feet in warm water containing prussic acid, or covering them with hot sinapisms, and, lastly, by the free admission of cool air, and the use of ice, or ice-cold drinks.

When hæmoptysis follows the suppression of an habitual discharge of blood, as of the catamenia, or piles, it will be necessary to open a vein, and afterwards apply leeches to the inside of the thighs, or around the anus, proceeding in other respects according to the plan already laid down.

We have hitherto spoken only of bronchial hæmorrhage, that is, of the exhalation of blood from the mucous surface of the air tubes; but when hæmoptysis arises from pulmonary apoplexy, or congestion of blood in the lungs, the blood is thrown up in such large quantities that it seems to be vomited. In cases of this description, the practitioner must lose no time in abstracting blood from the arm, regardless of quantity, for this operation is more effectual, once thoroughly performed, than several times imperfectly; and the loss of blood from venesection is always much less important than that which takes place from the lung. After having thus facilitated the restoration of the lung to its natural state, by two or three bleedings at short intervals, much benefit may be derived from a drastic purgative, and the administration of an injection of a similar kind.

If the spitting of blood has not, as is generally the case, entirely ceased, it will be proper to prescribe large doses of nitre, and of the extract of rhatany combined with conserve of roses.

When hæmoptysis is intermittent, that is, returns at regular periods, bark, or the sulphate of quina, will be most useful.

If the hæmorrhage is passive, connected with a scorbutic habit, or with a low asthenic fever, we must employ stimulants and tonics, especially iron

In a case of this kind, the author has known Bordeaux wine stop a profuse spitting of blood, after it had reduced the patient to the lowest degree of exhaustion and debility.

[In the ninth volume of the *Med. Chir. Trans.* some cases are narrated, which appear to prove that, occasionally, hæmoptysis is produced by the existence of worms in the intestinal canal, and may be cured by their expulsion: it is, therefore, always proper, especially when this species of hemorrhage occurs in young persons, to ascertain whether these insects are present or not.]

PHTHISIS.

Since the powers of medicine almost invariably fail in overcoming this disease after it has arrived at its second stage, our efforts must be directed to its prevention, or to arresting its progress, while the tubercles of the lungs are still in their crude state. For this purpose, it is necessary to make ourselves intimately acquainted with the physical, physiological, and morbid peculiarities in the constitution of our patient, as the indications of cure are to be sought for in his temperament, conformation, general constitution, and hereditary tendencies. Thus, when a patient, born of phthisical parents, with a deformed thorax, whose respiratory organs are easily disordered, and in whom there is reason to fear that tubercles are gradually forming, puts himself under our care, we must place him as far as possible in the opposite extreme to those circumstances which promote the developement of phthisis. Thus, we should advise his removal to a warm climate, avoiding a variable temperature, and giving the

preference to the vicinity of the sea.* Flannel should be worn over the entire surface of the body, the feet kept warm and dry by woollen stockings and thick shoes; the clothing accommodated to the various changes of weather, the diet solid and nourishing, but light, so as not to create febrile excitement; and he should be recommended to take moderate exercise, according to his strength, and of the kind most agreeable to him. All inordinate exertion of the larynx and lungs, as in singing and public speaking, must be avoided, especially at that period of life in which these organs assume an increased developement, and become more irritable; but, on the other hand, the habit of moderately loud reading, conjoined with the other measures of which we have spoken, will be useful in strengthening these organs, and dilating the chest. It will also be advisable at this period of life, that is, between the fifteenth and twenty-fifth years of age, to maintain an issue in the arm or thigh, in order to keep off from the lungs any irritation which might be set up. This precaution is never needless, unless in those cases where nature has anticipated it by some long established cutaneous eruption, habitual local sweating, regular hemorrhage, or some other kind of drain, the keeping up of which has become essential to health; in this case the practitioner has nothing to do but to leave nature alone.

With the same object in view, we should pay attention, in females, to the state of the catamenia, and obviate the bad effects arising from the suppression or irregular performance of this function, by opening a vein, and applying leeches to the inner

* We know of no situations in which more advantages are commanded than the cities of Naples, Pisa, and Nice.

side of the thighs, the use of hip baths, and aromatic fumigations directed towards the uterus, and by bathing the feet in water impregnated with mustard. These means should be employed with peculiar diligence at the periods when the catamenia ought to appear.

This treatment, though rather regimenal than medical, has been too often successful,—too many who seemed threatened victims to incipient phthisis, or in whom pneumonia was stirring up a latent tendency to the formation of tubercles, have owed their lives to the adoption of it, to allow our hesitating to insist on its importance.

But if, notwithstanding all our pains to guard off inflammation from the pulmonary organs, the symptoms announcing the first stage of phthisis show themselves, or an habitual dry cough, spitting of blood, dyspnœa, and sense of heat in the chest, preclude all doubt of its existence, we must then seek to lessen the pulmonary congestion by the moderate abstraction of blood, by establishing revulsion towards the extremities, through dry cupping and bathing the feet in hot water, and by the use of demulcents, refrigerants, and aperients; the cough may be quieted, in some degree, by opium, sirup of poppies, laudanum, prussic acid, &c., and, when there is nothing to contra-indicate them, sulphureous baths should be recommended for the same purpose. If the spitting of blood continues, we must endeavour to put a stop to it by the exhibition of nitre in large doses, combined with sirup or conserve of roses, and one or two drachms of the extract of rhatany.

The patient must be subjected to a regimen, which should be more or less strict, according to the severity of the symptoms; he should take nothing stimulating or difficult of digestion, but such light and yet nourishing articles of food, as milk, salep. sage-broth, &c.

Under this treatment, the symptoms of phthisis will often gradually disappear, and the disease remain stationary and almost latent during a longer or shorter time, in proportion to the strictness with which the patient obeys the injunctions of his physician.

Having thus traced the course which should be pursued to prevent the developement of phthisis, or arrest its progress during its incipient stage, we may now proceed to the consideration of the treatment required, when the tubercular matter has become softened, and is making its way through the bronchia. Here, unhappily, we feel obliged to acknowledge, not only the general insufficiency of art, but also our conviction that the greater number, at least, of the pretended or apparent cases of phthisis, in which a cure is said to have been effected, were in all probability merely instances of catarrh or chronic pleuritis, the protracted duration of which had brought on great emaciation. The opinion that a few phthisical patients are happy enough to escape alive from the ravages of this disease, is, however, rendered in some degree probable, by modern discoveries, which demonstrate cicatrizations in the lungs, where the stethoscope had previously detected the existence of cavities. In the hope of producing this state of the affected organs, the only kind of cure which can take place, the following plan must be pursued.

If the fever is slight, the perspirations moderate, and the functions of the stomach little disordered, we should endeavour to clear the lungs of the softened tubercular matter by promoting expectoration; the best means of doing this, especially in cases where either hæmoptysis or chronic diarrhœa exists, is the exhibition of ipecacuanha, in such doses as to excite vomiting, every fourth or fifth day, employing in the meanwhile the ordinary ex-

pectorants, as oxymel of squill, and especially the balsams, of which, however, the quantity must be carefully regulated, lest they should excite irritation in the stomach and bowels, or in the lungs. Inhalations of the vapour of tar, tolu, ether; a combination of aromatic and mucilaginous plants; pills or mixtures, containing turpentine, myrrh, or the tolu and Peru balsams, answer this purpose very effectually: these substances have also the additional advantage of correcting the fetid smell of the expectorated matter: a diluted solution of chlorine will have the same effect; but if, as often happens, it should occasion diarrhœa, the use of it must be discontinued. On the other hand, we must endeavour to promote sleep, and quiet the cough, by some of the preparations of opium, belladonna, prussic acid, &c.

The atmosphere in which the patient resides, should be warm: a pure fresh air is far from being beneficial: thus, phthisical patients are often improved by dwelling in stables, in low marshy situations, or valleys open only towards the south. The diet should be nourishing and easily digestible; bitters, as gentian, may be employed with advantage, also chalybeates and anti-scorbutic medicines; never, however, let them be given empirically, that is, without some distinct object in view. The ordinary pectoral drinks, emulsions, and cows' or asses' milk, should form the basis of our dietetic treatment.

Such are the measures, by which, in some cases, too few alas! it may be possible to overcome phthisis in its second stage; but when the supervention of colliquative sweats, excessive diarrhœa, frequent paroxysms of coughing, constant fever, and the expectoration of pus, announce that the disease has arrived at the last stage, little more can be hoped from the powers of medicine. For, in spite of the acetate of lead, bark, and bitters, given to diminish

the profuse perspirations; in spite of the strictest attention to diet, the use of mucilaginous, farinaceous food, of rhatany, ipecacuanha, opium, and particularly opiate injections, to counteract the diarrhœa; in spite of the belladonna, prussic acid, musk, stramonium, and white mustard seed, given to relieve the difficult breathing, the patient sinks into a state of extreme emaciation, to which, not unfrequently succeeds, even in young subjects, an attack of hemiplegia.

While any symptom of pulmonary congestion, or any pain in the chest remains, it will be proper to abstract blood to a small amount, unless the patient is too weak; in which case, we must content ourselves with the applications of dry cupping glasses, blisters, mustard poultices to the feet, the employment of mucilaginous drinks, and if there is no diarrhœa, of laxatives.

Whenever phthisis is attended with regular accessions of fever, the employment of the sulphate of quina must not be omitted; as it is abundantly proved by experience, that, although the febrile paroxysms are, without doubt, under the influence of the pulmonary disease, yet the intervals between them may be made much longer.

At the termination of the second stage of phthisis, artificial evacuations cease to be useful, and only aggravate the debility of the patient: it will, therefore, be better to suppress them, unless, as in the case of fistula in ano, they prove of decided benefit, or their suppression hastens the progress of the disease.

If bleeding is at all indicated to supply the place of some habitual discharge of blood, which has lately ceased, and to allay the irritation so frequently excited in phthisical patients by congestion in the lungs, the supervention of a severe catarrh or pertussis, and especially of pneumonia, renders it alto-

gether indispensable : for if the parenchyma between the different tubercles becomes in the least congested or inflamed, the functions of the lungs are nearly suspended, and the patient rapidly sinks. (See the chapter on *Pneumonia*.)

Venesection, in order to fulfil the object designed by it, or be of any advantage, must be sufficiently copious to remove all inflammation, and yet not so excessive as to induce a state of great debility, which is the more to be dreaded, as the patient, being liable to repeated attacks of the same kind, will thus become every time less and less able to resist them ; it must, however, be borne in mind that bleeding cannot prevent the developement of tubercles, or arrest their progress, much less eradicate them, and that its only real use is to restore the inflamed parenchyma of the lung to its natural condition, and prevent the further progress of inflammation.

In regard to laryngeal phthisis, generally a sequela of chronic laryngitis, (see this word,) it is almost always combined with a tubercular condition of the lungs, and is to be treated on the same principles, modified by the different situation and function of the organ, in which the disease is seated ; thus, so long as the period of irritation remains, absolute silence must be enjoined, together with the repeated application of leeches and poultices to the throat, fumigations directed towards the larynx, and, lastly, blisters and escharotics.

If these remedies do not effect the removal of the disease, it goes on to pulmonary consumption, and the probability of recovery diminishes daily : aromatic fumigations have little influence, when the larynx has become ulcerated, and we can then only deplore the insufficiency of our art : it is therefore imperative at the commencement of this disease, to

advise a removal into a suitable climate, as the most effectual means of arresting its progress.

[I subjoin a brief analysis of the plan of treatment recommended by Dr. Armstrong in his valuable work on Pulmonary Consumption.

In incipient phthisis, attended with marked constitutional excitement, moderate bleeding is occasionally of benefit; employed under other circumstances, or carried to any great extent, it is decidedly injurious. Powerful counter-irritation on the skin, at an early period of the disease, is likely to be useful, in relieving, if not checking, pthysical symptoms; but the hopelessness of success, is generally, in the mind of the patient, at least, too strong to encourage him to submit to, or the practitioner to urge so painful a remedy. With respect to digitalis, the temporary alleviation sometimes derived from it, is nearly counteracted by the debility and nervous irritation which it ultimately produces. The mineral acids appear to be of very little use, and by disordering the digestive organs, may prove injurious. Opium is a valuable remedy; but we should be mindful not to give it in too large, or too frequent doses, lest it check the expectoration, and oppress the lungs, through its operation on the brain. To moderate hectic symptoms, the sulphate of zinc may be prescribed with advantage. With respect to food, the principal rule is, that it should support, without exciting the constitution: in incipient consumption, a milk and vegetable diet, is mostly superior to every other, but in an advanced stage of the disease, animal food, and even ale, when they augment neither the cough nor the fever, may be safely and advantageously given. The threatenings of phthisis are best warded off by a sea voyage, residence in a warm climate, flannel clothing, cold or tepid sponging, moderate exercise, especially on horseback, and a nutritious diet.]

EMPHYSEMA OF THE LUNG.

Emphysema of the lung, being, according to Laennec, almost always the consequence of dry catarrh, the practical rules for its treatment are included in the chapter on that affection. Thus, wearing flannel, keeping the feet warm, residence in a warm climate not subject to sudden variations of temperature, sulphureous baths, friction of oil, the internal exhibition of the phellandrium aquaticum, turpentine, juniper berries, decoctions of serpentaria, and senega, gum resins, diuretics, if, as very commonly happens, there is anasarca, and chalybeates, when the patient is pallid, cachectic, or the flow of the catamenia scanty, constitute the treatment of this affection.

When the difficulty of breathing is considerable, it is necessary to draw blood from the arm, as disordered respiration brings on a state of congestion within the lungs, which does not fail to aggravate the disease already existing.

Inter-lobular emphysema, the characteristic signs of which are the dry crepitating rattle *à grosses bulles*, and the *murmur frictionis*, is a trifling affection, and, when confined to the lung, disappears spontaneously by gradual absorption of the air. If the air has made its way into the sub-cutaneous cellular tissue, a few punctures with a needle in those points where it has accumulated, will give exit to it.

PLEURITIS.

When the patient is strong and plethoric, we should endeavour on the first appearance of the disease, to arrest its progress and prevent its exten

sion to the parenchyma of the lungs by a prompt and active use of the ordinary antiphlogistic remedies. Thus, a copious abstraction of blood should be made from the arm, and, immediately afterwards, fifteen or twenty leeches, followed by cupping glasses, should be applied to the chest, over the chief seat of uneasiness.

If the patient continues to complain of pain, the leeches must be renewed at once, without waiting until the next day, and the chest covered with a large poultice, which will have the double advantage of promoting the flow of blood, and, by its warmth, alleviating the pain. Affixing cupping glasses over the punctures, as soon as the leeches have fallen off, causes a very considerable determination of blood towards the surface, and is one of the most efficacious means which can be resorted to in the cure of pleuritis: the benefit of blisters and leeches are both combined in it.

If, however, the fulness and frequency of the pulse, painful and oppressed breathing, and heat of skin, all continue after the first bleeding, it will be advisable to open the vein a second and even a third time, during the first two days, especially if the blood has a cupped and buffy surface, the pulse also being full and strong, and the pain stationary in the chest, without any symptom of approaching collapse. If there should be any danger of this event, leeches and cupping glasses must be substituted for the lancet.

A different plan of treatment may be adopted if a patient bears blood-letting very ill, while his digestive organs are not apt to become disordered, namely, the exhibition of tartarized antimony on the principle of counter-stimulation.

It may be given from the commencement of pleuritis in the proportion of eight or twelve grains, to four or six ounces of water; but as our great ob-

ject in this case is to destroy inflammation, we should not continue the administration of the tartar emetic longer than is necessary for this purpose.

When an attack of pleuritis comes on with great violence, after a sudden suppression of the catamenia, it is equally necessary to begin the treatment of it, with the employment of general and local bleeding, and in addition, to endeavour to recall the menstrual discharge by the application of leeches to the vagina and inner side of the thighs, also by the employment of hip baths, mustard pediluvia and diaphoretic drinks: the great danger which attends a copious effusion into the cavity of the thorax, and the always doubtful issue of pleuritis, authorize, if they do not require, these active measures.

It sometimes happens, that in spite of all the remedies already mentioned, the pain does not diminish, the fever keeps up, the pulse continues small and wiry, the breathing gets even more laborious, and a state of stupor and collapse is taking the place of the original febrile reaction.

At this critical period, the most decided benefit may be derived from the application of a large blister over the side, and if the symptoms of prostration are still more strongly marked, other two may be placed at the same time on the inferior extremities. In this way, every unfavourable symptom will often vanish, as if by a charm; and where venesection and cupping failed altogether, a blister succeeds at once.

Some physicians avoid blisters during the first stage of pleuritis, from a fear that their too early application has a tendency to promote effusion into the chest, and keep up fever: but we can truly say, that whenever we have previously employed general and local bleeding, and they have failed, the application of blisters has not only never increased, but has almost invariably mitigated the severity of

the symptoms, unless they have been resorted to very early.

The abstraction of blood is far from successful in every case of pleuritis : thus, sometimes, in consequence no doubt of some idiosyncrasy, it seems even to aggravate the disease ; counter-irritation by blisters is then our most natural and rational resource, but this also will occasionally succeed no better, and the patient ultimately gets well only under the use of musk, camphor, castor, warm bathing, &c. The skill and prudence of the practitioner must be exercised in prescribing these antispasmodics ; we can only point out to him the general principle, at the same time warning him of the bad consequences which may arise from its injudicious application.

When pleuritis reigns epidemically, and exists along with a disordered state of the liver and bowels, especially when also occurring in a wet autumn, and in persons previously weak, the evacuating plan of treatment should be substituted for that which is more strictly antiphlogistic. Ipecacuanha, tartarized antimony in injections, and purgatives, are in this case most beneficial ; they either remove all occasion for bleeding and blistering, or enable us to employ them with safety. As a general rule, venesection is improper in these circumstances, and should only be resorted to if some symptom clearly indicates the propriety of it, as a full pulse, the extension of inflammation to the lung, or the robust habit of the patient : the operation must be repeated, or not, according to its effects.

However beneficial the abstraction of blood may generally be, either in cutting short this disease while in its first stage, or in checking subsequent effusion, it is of little efficacy when the formation of false membranes has taken place, and the thorax is distended with serum ; it is only by the

employment of emetics every third or fourth day, by the application of blisters, and especially issues or setons in several parts of the body at once, that the effused fluid can become absorbed; this then is the treatment of chronic pleuritis. We must bear in mind that this disease is always tedious, and that, therefore, the patient's strength should be maintained in every way, which does not interfere with it.

For this purpose, he should take both solid and liquid food, and reside in an apartment kept regularly warm; the exhibition of diuretics and diaphoretic frictions, with the tincture of digitalis and mercury, and fumigation of the lower limbs, should also be resorted to.

If the patient's strength is not too much exhausted, a small bleeding from the arm, followed immediately by the employment of several purgatives, will be proper, and is sometimes sufficient to effect the absorption of the effused blood. Large doses of tartarized antimony are not, according to Laennec, of any decided benefit in chronic pleuritis, it should certainly be given to those only who suffer little from its use. Lastly, after every thing else has failed, and the general condition of the patient is not such as to make the success of such an operation improbable, it will be proper to have recourse to paracentesis. After the operation, some fluid, the nature of which may be varied according to circumstances, should be injected into the cavity of the pleura, as one of the best means of preventing the introduction of air, and the bad effects which generally result from it; as the lung becomes gradually permeable to air, less and less fluid enters the chest, and at length adhesion is established between the opposite surfaces of the pleura.

The auxiliary and subordinate measures, of which

we should avail ourselves in the cure of pleuritis during its acute stage, consist in a strict regulation of diet, the use of mucilaginous and slightly diaphoretic drinks, and, whenever there exists any cough, emulsions, or draughts, containing sirup of poppies, laudanum, &c.

When the invasion of pleuritis occurs with an attack of fever, which has been preceded by a shivering fit, like that of ague, we must lose no time during the intermission in employing the sulphate of quina in sufficiently large doses to cut short the disease at once, even to the amount of eighteen or twenty grains; for when once fully developed, a pleurisy, although connected with an intermittent fever, would not yield to remedies suitable to this last affection.—(See *Intermittent Fevers*.)

We refer to *Arachnitis* and *Peritonitis* for mention of the combination of pleuritis, with inflammation of other serous membranes, a combination over which art can exert little influence.

HYDROTHORAX.

After the minute details which we have entered into on the treatment of pleuritis, little remains to be said on that of hydrothorax; this disease is, however, much less frequently attended with fever, and therefore we may venture to take a wider range in our choice of remedies. Hamilton recommends the employment of drastic purgatives, and cites various cases in proof of their success. Digitalis, in full doses, either alone or combined with squill, calomel, cream of tartar, or nitre, in large quantities, have all proved successful in the hands of different practitioners. Fumigations with juniper

berries, frictions with oil, mercury, or tincture of cantharides, may also be tried.

If the patient is plethoric, and the disease connected with some affection of the heart, we should recommend the abstraction of blood : this, and the internal exhibition of squill, the frequent application of blisters to the chest, and, lastly, paracentesis, constitute the most essential part of the treatment of hydrothorax.

PNEUMOTHORAX.

As soon as pneumothorax has been ascertained to exist, it should be our first object, by aromatic and spiritous frictions, to promote the absorption of the air ; cupping should next be practised on the chest, and sinapisms or blisters applied to the lower extremities, and, lastly, the danger of suffocation is to be as far as possible obviated by a suitable posture. But when asphyxia is imminent, we must not hesitate to puncture the thorax for the purpose of giving exit to the air contained within it. When the cause of pneumothorax is a rupture of the air cells, in consequence of which the air has accumulated under the pleura, and then made its way into the cavity between the reflections of this membrane, there is much reason to expect success from an operation ; on the contrary, this is very improbable when pneumothorax depends on gangrene of the pleura, or on a communication between it and a tubercular cavity.

ASTHMA.

Asthma is one of those disorders, the cure of which continues to baffle the efforts of the physician, whether, as is most frequently the case, it exists in connexion with some organic disease of the heart or lungs, or depends on some merely nervous affection. But, however various in its nature this disease may be, the indications we have to fulfil are always the same, namely, to lessen the severity of the patient's sufferings during the fit, and in the intervals to retard or prevent its return.

In a paroxysm of asthma, the admission of fresh air, placing the patient in an upright posture, and loosening his dress so as to render the action of the chest as free as possible, are the first things to be attended to. The artificial inflation of air by means of a pair of bellows, which is very easily performed, is of the greatest benefit. At the same time, sinapisms should be applied to the legs, and dry cupping glasses to the base of the thorax, while friction with aromatic tinctures is practised along the vertebral column.

When these measures, which may be tried at once, are insufficient, we should next give castor, sulphuric ether, camphor, aësafoetida, or prussic acid. If the abdomen is tense, and the patient complains much of flatulence, a cold infusion of camomile, containing a drachm of assafoetida, should be administered; if the bowels are confined, an ounce and a half of castor oil, or some infusion of senna, should be added to it.

When this plan of treatment fails altogether, there is still left a powerful and almost immediate remedy, viz. galvanism. At the Hôtel-Dieu the author has had frequent occasion to admire the remarkable efficacy of this agent in the cure of

asthma; and those who attend the courses and experiments of Dr. Andrieux are almost daily witnesses of its successful application in this disease. We have known patients, in whom the paroxysms were so severe and frequent as to render it impossible for them to engage in any occupation, entirely restored to health by this means in the course of a few weeks. Galvanism has also this great advantage over other remedies, that it maintains respiration during the attack, while it often, if employed regularly, ultimately removes it. Without hesitation, therefore, we assign to it the highest rank among the agents employed in the cure of this disease.

When a paroxysm of asthma occurs in a plethoric habit, disposed to apoplexy, and there appears to be considerable congestion in the lungs or brain, a small bleeding from the arm will enable the practitioner to employ other measures with greater effect.

It is generally recommended, when the fit is going off, to promote expectoration, which is often copious, by tea, ipecacuanha, acetate of ammonia, the balsams, preparations of squill, &c.

In the intervals between the asthmatic paroxysms, our first object should be to remove, as far as possible, the exciting causes of it; for this purpose, we must study the influence of climate, season, winds, diet, and occupation; the physical and moral habits, and even diseases of the patient; thus only can benefit be derived from medicines. The enumeration of all those which have been recommended in this disease would make a long list; the principal are valerian, sulphuric and nitric ether, ipecacuanha, the gum resins, especially assafoetida and opium, extract of hyoscyamus, belladonna, prussic acid, colchicum, myrrh, sub-carbonate of iron, coffee, oxide of zinc, chalybeate waters, cold bathing and affusion, and, in cases where the paroxysms return

at regular periods, sulphate of quina, alone or in combination with one or other of the preceding substances, according to the particular condition of the individual. No universal or even general rule can be laid down; this plan succeeds with one person, and that with another; thus, for some time, we are obliged to feel our way as it were in the dark, and experience in each case alone enables us to arrive at a knowledge of its *Jurantia Lædencia*. It need hardly be remarked, that the mode of treatment just pointed out is applicable only to purely nervous asthma, and that if there exists any complication of disease of the heart, lungs, or alimentary canal, our remedies must be regulated accordingly.

In every case where the catamenia are deficient, or an eruption or discharge of any kind is suppressed, it is necessary to re-establish it, or supply its place; and similar attention must be paid to the different regimenæal precautions relative to climate, diet, clothing, and exercise.—(See also *Catarrh, Angina Pectoris*, and other diseases which may be combined with asthma.)

[Among the antispasmodics which have been found useful in alleviating the paroxysms of asthma, the author has omitted to mention, perhaps, the most efficacious; namely, the smoke of stramonium inhaled into the lungs. The employment of galvanism, as recommended by French practitioners, has been forcibly advocated in this country by Dr. Wilson Philip.]

DISEASES OF THE HEART AND LARGE VESSELS.

AORTITIS.

AORTITIS, more than any other inflammatory disease, requires an energetic antiphlogistic treatment, especially when the lining membrane of the heart becomes involved in the disease. In several cases of this kind which have fallen within our observation at the Hôtel-Dieu, the symptoms, namely, extreme frequency of the pulse, sense of agony, dyspnœa, and embarrassment of the pulmonary circulation, have not given way until after four or five copious bleedings from the arm, and these in the space of a few hours. Thus then the free abstraction of blood, repeated at near intervals, the application of numerous leeches over the thorax or abdomen, according as the thoracic or abdominal portion of the aorta may be affected, the frequent use of hot pediluvia, acidulated drinks in large quantity, and absolute rest, form the basis of the treatment of this disease; lastly, digitalis, camphor and nitre may be given to calm the irritability of the vascular system, either alone or in combination, according to the particular state of the case; however, in order to derive much benefit from these medicines, especially from digitalis, the stomach must be in a perfectly healthy condition.

ANEURISM OF THE AORTA.

Of the various methods of cure which have been employed in this dreadful disease, none has acquired such general reputation as that of Valsalva. All other things being equal, the chances of success are so much the greater, as the treatment begins early; hence the necessity of a careful and minute examination the moment that we suspect any disease of the heart or large vessels, especially if any tumour is externally visible.

The treatment of aortal aneurism being the same as that of dilatation and hypertrophy of the heart, we refer to the chapter on these subjects for a description of the plan of Valsalva and Albertini, simply remarking here, that when there is any external protrusion, the application of ice is very beneficial.

INDURATION AND VEGETATIONS OF THE VALVES.

Like every other disease which disturbs the functions of circulation and respiration, indurations and excrescences of the valves of the heart require the employment of general bleeding, as soon as the disease has attained any considerable degree of severity. The abstraction of blood should be so much the less copious, as the disease is further advanced, and the general state of the patient unfavourable to the loss. Leeches applied to the region of the heart and to the anus, are very serviceable in the intervals between general bleedings, or when the vascular system is too full to bear it. This, with rigid abstinence, rest, and the copious use of diluents,

is all that is necessary in the absence of any leucophlegmatic tendency; but when disease of the heart has arrived at its last stage, we may employ diuretics, aperients, the *uvæ ursi*, nitre, acetate of potash, squill, iodine, digitalis, acetate of ammonia, whey, and white wine; opiates should also be prescribed, if necessary, to produce sleep at night; a combination of digitalis, with camphor, valerian, and orange leaves, is often very beneficial: we have even, in some cases, known the almost perfect cessation of dyspnœa and palpitation follow its use. Unhappily this alleviation is only temporary.

When there is much dyspnœa, absolute rest, the upright posture, and applying cupping glasses to the thighs, and a blister over the sternum, enable the patient, for a time, to breathe more freely. The same may be said of the employment, during the latter stages of disease of the heart, of drastic purgatives, as gamboge, croton oil, and tartar emetic. We ought, however, before exhibiting these violent medicines, to ascertain the condition of the alimentary canal, and assure ourselves that no inflammation exists: in this case, the powerful revulsion, of which the intestines are thus made the seat, considerably lessens the severity of the symptoms. Ipecacuanha, given as an emetic, often produces similar effects.

There is still another method of treatment, which it would be improper not to mention, and which we have known to be successful in cases abandoned, as hopeless, by the most eminent physicians. It is peculiarly adapted to persons of a nervous temperament, and to cases in which the pulmonary system is less affected than the heart, the primary seat of disease.

In these cases, after a patient has been so much exhausted by the frequent and copious abstraction of blood, as to make it dangerous to persevere any

longer in this plan of treatment, and the progress of the disease has been in no degree arrested by it; the use of *cold or tepid baths*, according to the patient's inclination, has moderated the action of the heart, and all the secondary symptoms have gradually diminished; the power of digestion, which was before extremely imperfect, has returned, and in many instances the patient has continued to live a long time in a very comfortable state, and in some few instances has perfectly recovered. Lastly, it is proper to advise persons in whom the symptoms of induration of the valves have been detected, to refrain from any exertion in the slightest degree fatiguing, as running, riding fast, walking up hill: such a person should maintain the utmost temperance and regularity in his habits, totally abstaining from wine, coffee, and every other stimulant; in a word, he must guard against every thing, the influence of which extends directly, or indirectly, to the central organ of circulation.

PERICARDITIS.

This disease, though in the highest degree dangerous, ought not to be regarded as incurable. The numerous instances in which we detect the existence of pericarditis, on the *post mortem* examination of persons who have died in consequence of other affections, is a sufficient authority for this assertion; and the inference is fairly deducible, not only that pericarditis is often unsuspected during life, but also, that so far from being necessarily, and invariably, fatal, is often recovered from, even when no treatment has been directly aimed against it. On this ground, therefore, we do not hesitate to recommend, as a general rule, that in every case of pain in the

region of the heart, accompanied with fever, active and powerful measures should be adopted, beginning with a large bleeding from the arm, and following it up by the application of twenty-five or thirty leeches, applying, afterwards, cupping glasses to promote still further the flow of blood.

If, notwithstanding, the symptoms of pericarditis remain, or are not sufficiently mitigated to remove all apprehension, venesection must be practised a second time, provided that the patient's strength is ever so little adequate to it; and, on this point, we must not be guided by the developement of the pulse, but by the general condition of the patient. Immediately after this operation, a large blister should be placed on the left side of the thorax, merely leaving just room enough for the further application of leeches, if the violence of the febrile reaction and the heat of the skin should make the antiphlogistic plan still necessary.

But if no impression should seem to be made on the disease by these active measures, it will be necessary, while the pericarditis is still under the influence of medicine, and affusion has only commenced, to set up in the alimentary canal, even at the risk of exciting a gastro-enteritis, such a counter-irritation as shall arrest its progress; for what is the danger of gastro-enteritis, compared to that of inflammation in the pericardium? Injections of tartarized antimony should therefore be administered for two or three days successively, or this medicine may be taken into the stomach in doses varying from twelve to twenty-four grains.

As soon as the symptoms of pericarditis appear to become milder, a constant revulsion towards the lower limbs should be maintained by a series of blisters, renewed every day; the bowels at the same time being kept open by aperient laxatives, unless these medicines are decidedly contra-indicated: in

this way, we may prevent the progress of the serous effusion, which pericarditis always has a tendency to excite, or at least, promote adhesion. Afterwards, the use of demulcent fluids, the strictest regulation of diet, so long as any fever remains, and perfect rest, will complete the cure of acute pericarditis.

But when this inflammation is passing into a chronic stage, we must have recourse to mercurial frictions, carried even to salivation, insert a seton, or issue, over the præcordial region, prescribe laxatives, diuretics, and sudorifics, as squill, digitalis, nitre, ipecacuanha, Dover's powder, and, lastly, if these measures fail, puncture the pericardium in the manner we shall presently describe.

DROPSY OF THE PERICARDIUM.

Having already detailed the preventive treatment of this affection, nothing further remains to be mentioned respecting it, except to describe the operation which has been proposed by several authors for the cure of it. The manner in which Laennec recommends that it should be performed, is by perforating the sternum with the crown of a trepan, below the xyphoid cartilage; that region of the thorax being, according to this physician, the most favourably situated, as enabling the operator to feel and see the pericardium, before puncturing it. De sault, in both the instances in which he opened this sac, made his incision between the cartilages of the sixth and seventh left ribs; but, before attempting such an operation, which however is regarded by some practitioners as free from danger, it will be advisable to ascertain positively the existence of fluid in the pericardium, by a slight puncture with a

very fine trocar. After having emptied the sac, the operator should inject into it some mild unirritating fluid, gradually diminishing the quantity at each time of injection, which will prevent the access of air, and all the bad consequences of its contact with a serous cavity.

HYPERTROPHY OF THE HEART.

Of all the organic affections of the heart, hypertrophy, whether simple or combined with dilatation, is the most susceptible of cure. But in order to attain this desirable object, an antiphlogistic plan of treatment must be rigorously pursued to its utmost extent, before infiltration of the different tissues has supervened.

We are now about to detail the method adopted by Valsalva and Albertini, in the treatment of aneurisms, a method which, at the present day, is generally allowed to be the most useful. In the first place, the patient is bled copiously from the arm, and the operation is repeated every third or fourth day, or at longer or shorter intervals, according to the severity of the symptoms, until palpitation ceases, and on application of the stethoscope, the action of the heart communicates a very feeble impulse. At the same time, the quantity of food must be diminished, and gradually reduced to six or eight ounces per diem, until the patient is made so weak as scarcely to be able to walk. During the whole of this period, perfect rest in bed is indispensable; and an issue or seton may be inserted in the præcordial region as a useful auxiliary measure. This severe treatment must be persevered in, even for several months after every symptom of disease in the heart has disappeared; we may then begin, gradual-

ly, to increase the allowance of food, but the patient must not be permitted, before the end of a year, to return to his old habits of active life, and he must confine himself to such occupations as are suitable to the nature of his disease.

When hypertrophy has already gone on to general infiltration, venesection is still useful to assist the operation of diuretics, and lessen dyspnœa and palpitation; while, on the other hand, nitre, digitalis, prussic acid, squill, acetate of potash and purgatives should be given, for the purpose of removing the leucophlegmatic condition of the patient. Lastly, the catarrh, and œdema of the lungs, which almost invariably attend dilatation and hypertrophy of the heart, must be treated according to the principles already laid down, in treating of these affections. Prussic acid, preparations of opium and hyosciamus, are eminently serviceable in allaying cough and enabling the patient to rest at night.

When disease of the heart is confined to simple dilatation, without hypertrophy, bleeding should be employed with much greater caution, and restricted to those instances in which an unusual severity of the symptoms require it. Bitters, the various preparations of iron, as the sub-carbonate, iron filings, chalybeate waters, cinchona, &c., should be employed in preference: in cases of this kind, we have seen very decided alleviation follow the use of valerian, cold bathing, and the various antispasmodics, as musk, camphor, &c. When dilatation of the heart is a consequence of the contraction of its orifices, or any affection of the lung or pleura, our treatment should be principally directed to the original disease.

CARDITIS.

This inflammation requires the most energetic antiphlogistic treatment, and success depends on the activity with which it is employed. In the first place, a large quantity of blood must be drawn from the arm, the operation being repeated several times, and at short intervals, until the action of the heart has returned to its natural frequency and force.—After having thus arrested the further progress of inflammation, and prevented congestion of the lungs, leeches should be applied in great numbers, over the præcordia, which should be kept continually below the natural temperature, by the constant application of wet cloths, or a bladder containing ice. In the meanwhile, the feet should be bathed several times during the day in hot water, impregnated with mustard, and purgative injections administered, which, by acting exclusively on the large intestines, may be employed without exciting vascular reaction. When the pulse has become decidedly less quick and forcible, we may safely have recourse to blisters, applied to the inner side of the thighs. A very spare diet, drinking copiously of mild fluids, quietude of mind, and absolute rest, are very important auxiliary measures. See also *Pericarditis*.

PALPITATION.

The first thing that should be attended to in the cure of palpitation, is to ascertain its cause, as our treatment must vary accordingly. If it either depends upon, or is connected with a plethoric state, if it follows the suppression of some discharge of blood, whether menstrual, uterine, hemorrhoidal,

or nasal, natural or accidental, it is necessary to take blood from a vein, and to supply the place of the deficient emunctory by leeches, baths, &c.

Where palpitation appears to have been induced by excessive nervous susceptibility, as is often observed in hysterical females, hypochondriacs, and in those persons usually called nervous, the measures, from the adoption of which we may principally hope for success, are tepid or cold bathing, according to the inclination of the patient, dashing over the face cool water, the internal exhibition of digitalis, alone or in combination with camphor, assafœtida in pills or injection, valerian, cinchona, castor, subcarbonate of iron, hydrocyanic acid, sulphuric ether, tincture of opium, &c. It is also proper to recommend that every article of food, whether solid or liquid, should be taken cold. But if this complaint has been brought on by violent exercise, excess in study, venereal intemperance, or the use of stimulating food, as spiritous liquors or coffee, if it is dependent on continued mental uneasiness, powerful passions, &c., it is essential to the recovery of the patient, that he should abandon his bad habits, and, as far as is in his power, regulate his passions. Every thing depends on the patient; the physician is called upon to do nothing but silently look on; unless a change in the patient's habits of life is insufficient to effect a corresponding change in the disease, and then the plan of treatment already detailed, must be pursued.

When palpitation follows the repression of gout, rheumatism, ringworm, or sick head-ache, either the original disease must be brought back, or an artificial discharge substituted for it.

SYNCOPE.

The first thing necessary in idiopathic syncope, arising from some momentary or accidental cause, is to place the patient in the horizontal posture, and throw cold water over his face; his dress should be loosened, so as to assist respiration, and a current of fresh cool air freely admitted; if these measures are not sufficient, volatile and pungent substances, as ether, ammonia, and eau de Cologne, should be held to the nose, and the temples, lips, and nostrils rubbed with them. As soon as consciousness returns, a small quantity of wine, cold pure water, or some aromatic distilled water, containing ten or twelve drops of ether, or some aromatic tincture, should be administered.

If syncope continues a long time, and nothing indicates the existence of an internal hemorrhage, in which case it would be necessary to draw blood from the arm, we must endeavour to arouse the patient from this state, which is becoming alarming, by frictions of the tincture of cantharides, ammoniacal liniment, or hot spirit of camphor at the præcordial region, and along the inner side of the thighs; by irritating enemata, and even by the application of boiling water or moxa to the epigastrium. Symptomatic syncope will be spoken of under the diseases of which it is a consequence.

 ANGINA PECTORIS.

Angina pectoris is not only, in common with most affections of the nervous system, a very intractible disease, but from the importance of the organs supplied by the affected nerves, it is in the highest de-

gree alarming, and often fatal; for, besides the immediate danger attending each paroxysm, we have also to dread the more distant consequences of their frequent repetition, namely, organic disease of the heart and its connexions. Moreover, the most rational and judicious plans of treatment hitherto devised, almost invariably fail. It is, then, only before the paroxysms have become very violent, and while the disease is so recent that it has not become habitual, that we can expect to root it out.

For this purpose, it is necessary to inquire into the circumstances to which the disease owes its origin, those which exert any influence over the return of the paroxysms, the previous diseases the patient may have laboured under, and his habits and state of mind, and regulate our treatment accordingly; removing him, as far as possible, from the influence of the various causes which are likely to bring on a fit, and re-establishing the diseases or secretions which may have been repressed, or at least supplying their place by permanent artificial discharges. The patient should always walk slowly, avoid much exertion, restrict himself to a light and sparing diet and regimen, guard against mental agitation, which almost always exercises an unfavourable influence over this disease, and, in short, avoid the circumstances which favour a return of the attack.

Most of the remedies hitherto employed against angina pectoris, belong to the class of antispasmodics; they are, camphor, guaiacum, castor, opium, alone or in combination with tartarized antimony, in pills, containing half a grain of each, hydrocyanic acid, the extracts of conium, and hyosciamus, oil of amber, ether, the sulphate and oxide of zinc, and infusions of valerian, camomile, arnica montana, &c.; each of these medicines has appeared beneficial in different instances, but their effects have not

been decided enough to induce us to select any one as much superior to the others, except in those cases where there is very severe pain, and then, the preference should be given to narcotics: the best time for their exhibition is the evening, a little before the patient goes to bed.

Much benefit has been occasionally derived from rubbing in, below the sternum, either the oxyuni-riate of mercury, mixed up with lard, in the proportion of six grains to an ounce, or the tartar emetic ointment: in other instances, blistering, cupping, and the insertion of setons in the chest, have afforded relief. According to Laennec, the application of two powerfully magnetic plates, the one over the præcordia, the other at the opposite point, is often beneficial.

In individuals of feeble constitution, cold bathing, chalybeates, bitter tonics, cinchona, rhubarb, gentian, rich wines, and nourishing food, are necessary: if they have previously had an attack of rheumatism, vapour baths, stramonium, the Aconitum Napellus, and Dover's powder, should be employed. When there is great irritability of the nervous system, while the lungs are unaffected, cold bathing, affusions, valerian, assafœtida, musk, and castor, are preferable. Lastly, if the patient is plethoric, blood should be taken from the arm, and diluent and refrigerating liquids, with digitalis, prescribed.

During a paroxysm, we should have recourse to pediluvia containing muriatic acid, sinapisms, or what is better, to galvanism, in the manner described in the chapter on asthma. Dr. Andrieux has published some very curious facts respecting this subject, in his memoir on galvanism.*

* See *Revue Medicale and Journal de Clinique*, tome i. page 241, année 1824.

The bowels should be kept open by castor oil, seidlitz water, &c. If any tendency to hypertrophy of the heart exists, a small quantity of blood should be occasionally taken, by the lancet, and an issue inserted in the arm: should the patient complain of indigestion, greater attention must be paid to his diet; hot food should be prohibited, and a little aromatic water, or a small quantity of magnesia, may be given after meals, to prevent flatulence, which is very common in this disease.

DISEASES OF THE ABDOMEN.

DISEASES OF THE ALIMENTARY CANAL,

STOMATITIS.

WHEN inflammation of the gums, or any other part of the mucous membrane of the mouth, is attended with considerable pain and tumefaction, it is necessary to apply twelve or fifteen leeches to the corresponding part of the jaw, or a smaller number on the inflamed gums: sometimes, simply searifying them will answer the same purpose; this, in conjunction with the diligent use of pediluvia, poultices to the cheek and tepid demulcent gargles, and flannels around the head, will generally prove sufficient. When a carious tooth is the cause of the mischief, it is better, first, to remove the inflammation, and to extract the tooth afterwards.

In the *couenneuse* stomatitis, which, in other respects, requires the same treatment, the mucous surface should be smeared, by means of a camel's hair pencil, with a paste formed of equal parts of honey and muriatic acid; and if there are any small superficial ulcers, they should be touched with a stick of the nitrate of silver, pointed like a pencil.

When inflammation of the mouth leads to the secretion of pulpy matter, it should be removed by a pair of forceps, or lint, carefully guarding against injury to the mucous membrane, and the mouth washed with acidulated gargles.

If the inflammation assumes a gangrenous character, the mouth is to be gargled with a solution of

chloride of soda, mixed with decoction of bark; this should be used as often as the patient wishes to drink, in order to prevent the samous matter from passing into the stomach: the shreds should be removed by a pair of scissors or forceps, and the affected parts sponged with a pledget of lint imbued with lemon juice, or diluted muriatic acid, always taking care to wash the mouth thoroughly afterwards.

When this affection has been occasioned by mercury, and is accompanied with profuse salivation, and remarkable fetor of the breath, it is proper to apply leeches once or twice below the angle of the jaw, and to prescribe gargles containing the decoction of cinchona, or the bark of the pomegranate tree, the *vinum opii*, a solution of the sulphate of zinc, acetate of lead, or of the chloride of soda; at the same time, acting on the alimentary canal, by means of laxatives.

Fungous growths on the gums, in the chronic stage of this disease, should be well cauterized, or they will be continually springing up afresh.

APHTHÆ.

The treatment of aphthæ is extremely simple, consisting in nothing more than regimenæal precautions, and the use of detergent washes, applied by means of a camel's hair pencil, to the affected parts: for this purpose, we frequently, and with great success, employ a weak solution of the chloruret of soda. Infants at the breast, however, will derive little benefit from any local application, without the milk of a good nurse. If the aphthæ are connected with a pustular, or erysipelatous inflammation of the remainder of the alimentary canal, our attention should be principally directed to this last affection. See *Gastro-enteritis*:

GLOSSITIS.

When inflammation of the muscular substance of the tongue is considerable, blood must be promptly drawn from the arm, especially if any fever exists along with it, at the same time applying leeches around the jaw, and even at the sides of the tongue if possible, and establishing a salutary revulsion, by means of drastic purgatives, emetics, and mustard pediluvia. If, notwithstanding, the tumefaction of the tongue increases, the patient complains much of painful thirst, and is totally unable to swallow, we must endeavour to supply the place of drinking by baths, injections, and keeping the tongue moist with lemon juice: when suffocation appears imminent, deep incisions must be made along the sides of the tongue, and, if that is not sufficient, our last resource is in the performance of tracheotomy.

For the treatment of suppuration, gangrene, and cancer of the tongue, we refer to the Manual of Clinical Surgery; these affections not coming under the care of the physician.

CYNANCHE TONSILLARIS AND PHARYNGEA.

In a slight attack, unattended with fever, nothing more is required than the use of demulcent, astringent, or acidulated gargles; as, for instance, the decoction of mallow, barley, or the bark of the pomegranate, acidulated with vinegar or syrup of mulberries, a solution of alum, and lozenges made of this salt and sugar, are also beneficial: along with gargles, injections, mustard pediluvia morning and evening, hot emollient cataplasms to the neck, and inhalations of the vapour of boiling water, are to be employed.

But when the inflammation is more considerable, with severe pain and fever, its progress must be opposed by more vigorous measures: in this case, if the tongue is clean, or only slightly furred, and nothing decidedly indicates a disordered condition of the *primæ viæ*, the first thing necessary is, the application of twenty or thirty leeches, according to the severity of the complaint, and apparent strength of the patient. If the general symptoms of inflammation exist to any great extent, if there are any indications of a plethoric habit, or of cerebral congestion, it will be advisable to abstract blood copiously from the arm before applying leeches. The effect of the bleeding will be promoted by the application of emollient poultices, mustard pediluvia, and the use of slightly laxative drinks, such as a solution of the supertartrate of potash, a decoction of tamarinds, &c.; also, by purgative injections, unless diarrhœa, or some other symptom of intestinal irritation, should be present. Should any pain remain after the first application of leeches, they must be at once repeated, and our subsequent treatment regulated by the effect.

But when cynanche is connected with disorder of the digestive organs; when the tongue is covered with a thick fur, and the patient has long complained of want of appetite, it would be very injudicious to adopt an antiphlogistic plan of treatment, which would not exert any influence over the complaint, and would weaken the patient to no purpose; on the contrary, our principal object in such circumstances, is to clear out the *primæ viæ*; especially if the diseases prevalent at the time admit the employment of evacuants. Thus, we should at once prescribe an emetic of ipecacuanha, or an injection of tartarized antimony, with half an ounce of the supertartrate of potash, or sulphate of magnesia. The almost immediate cessation of the symptoms of disor-

der in the digestive organs, as well as of the inflammation in the throat, and the return of appetite, will show the propriety of this treatment. Acidulated or laxative drinks and purgatives will, afterwards, be sufficient in many of these cases.

It not unfrequently happens, that inflammation is combined with bilious *saburral* condition of the *primæ viæ*, and that the cynanche quickly disappears when the employment of the lancet, or leeches, precedes that of emetics or injections; or, when, on the contrary, these evacuants precede the abstraction of blood, according as one or other morbid condition may happen to preponderate. This observation applies not merely to individual cases, but to whole epidemics; thus, I have seen numerous cases of cynanche cured at once by emetics, when the abstraction of blood had been previously made, while others, in which this preparatory measure was omitted, have been, comparatively, unaffected by them, and *vice versa*. Nothing but ignorance or the prejudices of system, can cast a doubt on a point which has been long determined by the most able physicians. As soon as suppuration of the tonsils has occurred, the matter should be evacuated; after which, demulcent gargles are necessary.

Chronic inflammation of the *velum palati* and tonsils, requires, in addition to the treatment which we have just described, the application of a blister to the nucha, and in some cases, partial excision of the indurated glands, or uvula. See also *Stomatitis*, *Angina Laryngea*, *Scarlatina*.

ANGINA PULTACEA, AND COUENNEUSE.

The danger to be apprehended from angina *couenneuse* arises principally from two circumstances, namely, the extent of the affected surface, and the imperfect transmission of air through the respiratory tubes, when, as often happens, they become secondarily affected. The fetid smell of the false membranes and mouth, similar to that observed in ptyalism, is occasioned by an accidental modification in the secretions, not, in any degree, by mortification of the affected parts, as in angina gangrenosa; so that although this inflammation appears, and, under certain circumstances, is very dangerous, sometimes terminating fatally in the course of three or four days; yet, generally, the treatment of it is successful, especially when conducted in the manner which we are about to describe.

If the inflammation is considerable, the breathing laborious, and the patient comatose; and if there is any appearance of cerebral and pulmonary congestion, blood must be taken from the arm, and leeches to the number of thirty, forty, or fifty, in a robust and youthful habit, must subsequently be applied round the throat. By this active treatment it is sometimes possible to cut short the disease, and prevent the formation of false membranes. We must not hesitate to employ leeches or the lancet two or three times, if necessary. Along with these measures should be associated blisters to the neck, nucha, and front of the chest, and sinapisms to the inferior extremities, while the bowels are stimulated by drastic purgatives.

If, after having pursued this plan of treatment until we have arrested the inflammation, or exhausted the patient's strength, recovery is prevented solely in consequence of false membranes, we must

endeavour to effect their removal by the exhibition of an emetic every second hour; the same purpose may be answered, though in a different way, by frequently touching the membranous shreds with a paste, containing equal parts of muriatic acid and the honey of roses; also, by blowing alum against the back part of the throat.

The use of antispasmodics, as musk, castor, camphor, assafoetida, should be limited to those cases in which some troublesome symptom, connected only indirectly with the original disease, occurs in a nervous habit of body: then this class of medicines may be administered with propriety, either by injections, or by the skin deprived of its cuticle, if deglutition is so difficult as to prevent their being taken by the mouth. See also the words *Croup* and *Cynanche Laryngea*.

It is scarcely necessary to remark, that if the attack is slight, our treatment should correspond with it, and be restricted to simple applications, as gargles, poultices to the neck, pediluvia, and a few leeches.

Cynanche pultacea, being generally a less serious affection than the other, requires a less active treatment. The mouth must be cleansed with pledgets of lint, and washed with acidulated gargles, especially of muriatic acid; and blisters should be applied to the inferior extremities. It would not be advisable to abstract blood, unless the patient were robust, or threatened with cerebral congestion or inflammation; on the contrary, the employment of cinchona, and a tonic treatment, should be preferred. for an asthenic diathesis, especially in infants, appears to be more intimately connected with this than with the other species of *cynanche*.

CYNANCHE GANGRENOZA.

If malignant sore throat were the result of a very high degree of inflammation, it would be easy to prevent the developement of it by attacking this inflammation; but this is not the case. Its putrid nature requires, from the very commencement, a stimulating and alterative plan of treatment, which, however, is generally too slow in its operation to be successful, on account of the rapidity with which sloughs are formed. Thus, we would advise the practitioner to wait a little before he has recourse to the abstraction of blood, when a pain in the throat arises during the prevalence of an epidemic malignant cynanche, when it occurs in children, or very delicate females, in any one who has been nurse to a patient with this complaint, or has himself gangrenous spots on any part of his body, or when it occurs along with any eruption of a livid hue.

As soon as we are satisfied respecting the character of the cynanche, our efforts must be directed to the preventing of gangrene by emetics of ipecacuanha, drawing in with the breath powdered alum, or calomel, so as to affect the back of the throat with it, directing the vapour of ether and ammonia, or fumigations of chlorine, towards this part, by gargles, containing the chloride of soda, cinchona, camphor, or horse radish, and all the other medicines of this description. At the same time we must avail ourselves of the repeated applications of sinapisms to the extremities, avoiding blisters, which are apt to occasion gangrene of the skin: the body should be rubbed with tincture of cinchona, or spirit of camphor, while the patient takes rich wines, acidulated drinks, decoction of bark, a solution of the chloride of soda, sulphate of quina, camphor, musk, acetate of ammonia, sulphuric ether, and any

other diffusible stimulants which appear to agree with the patient.

As gangrene appears in the back of the throat, or, even after the complete formation of specks, they should be thoroughly touched with some caustic application, as sulphuric acid, (in the proportion of thirty or forty drops in an ounce of honey,) muriatic acid, muriate or nitrate of mercury, &c. always taking care to wash the mouth thoroughly afterwards. In other respects, the internal treatment resembles that which we have just described.

The patient should breathe a fresh and dry air, and it may be useful to place basins, containing a solution of the chloride of lime, around the bed. Lastly, when the sloughs begin to separate, the same means must be employed as in inflammation of the gums.

INDIGESTION.

The treatment of indigestion varies with the cause of it ; thus, when it is occasioned merely by an overloaded state of the stomach, nothing more is necessary than to walk out for some time in the open air, drink copiously of diluent and gently stimulating fluids, as infusion of camomile, tea, &c. and to unload the bowels by one or two injections; if these measures are not sufficient, vomiting, excited by a grain of tartarized antimony, or by tickling the uvula, may be resorted to.

If, on the contrary, indigestion is to be attributed to some bad quality of the food, or to poisonous substances having been mixed with it, no time should be lost in evacuating the stomach by an emetic or œsophagus sound, the subsequent treatment being

regulated by the nature of these substances.—(See the chapters on *Poisoning*.)

When indigestion arises from temporary debility of the stomach, as in consequence of some powerful mental emotion, and after a very moderate use of digestible food, it is necessary to give stimulants, or antispasmodics, as ether, brandy, opium, &c.

The treatment of indigestion, when symptomatic of some disease of the stomach, or other organ, and accompanying an attack of apoplexy or gout, is included in that of the primary affection. (See *Gastritis*, *Gastrodynia*.)

GASTRITIS.

While this inflammation is but slight, the simple abstraction of every thing hurtful is sufficient to cure it. The patient should drink freely of mucilaginous and acidulated liquids, and abstain from solid food; the functions of the skin being promoted by baths or pediluvia, and the bowels kept open by enemata.

But if there is much pain, with a frequent pulse and hot skin, and the tongue is florid and becoming dry, it will be necessary, in addition to these simple measures, to direct the application of fifteen or twenty leeches to the epigastrium, or in a larger or smaller number, according to the severity of the symptoms, the age, strength, constitution, and peculiar habits of the patient, having recourse to them two or three times successively, if the inflammation does not yield; when the leeches have fallen off, a large poultice should be placed over the abdomen, or if the weight of this produces uneasiness, hot fomentations may be substituted. But if the skin is pungently hot, and the patient complains much of

thirst, considerable benefit may be derived from the application of cloths, wrung out of cold acidulated water, and from allowing the patient to gratify his thirst in a similar way.

If the inflammation is attended with high fever, occurs in a plethoric habit of body, or in persons dwelling in situations where inflammatory complaints generally assume a severe character, it is most prudent to draw a moderate quantity of blood from the arm, before trusting wholly to leeches and tepid baths. This rule is also applicable in cases of gastritis, occasioned by the patient having taken some acrid and highly stimulating substance, which is likely to excite inflammation over a large surface of the intestinal canal; in this case it will be also advisable to clear out the bowels by a mild aperient.

When gastritis is attended with frequent vomiting, which does not appear to depend upon inflammation of the brain, or any poisonous substance, after we have ineffectually attempted to check it by leeches, poultices, and cold applications, recourse is to be had to the warm bath, which the patient should use frequently: he should be allowed to take ices, suck the juice of lemons and oranges, and if these means fail, fifteen or thirty drops of the tincture of opium may be prescribed. Lastly, the application of blisters to the extremities, and the internal exhibition of magnesia, subnitrate of bismuth, and carbonic acid, may succeed in removing this distressing symptom.

Gastritis sometimes occurs, with a very small pulse, considerable pain in the stomach, and a tendency to syncope, but without febrile reaction, and with a cold skin. These cases require, in the first place, the evacuation of the contents of the stomach, by titillation of the uvula, or by introducing a probang into the œsophagus, sinapisms to the extremities, and poultices to the abdomen, or friction with

aromatic tinctures, spirit of camphor. ether, &c. The use of the warm bath and the abstraction of blood must be deferred till a later period, when the skin has regained its warmth, and febrile reaction is established. Whatever measures we adopt, particular attention should be paid to the effects produced by them, that they may be discontinued or modified if necessary. We need not say more at present about this form of gastritis, as we shall have occasion to speak again of it, when on the subject of poisoning.

In proportion as the symptoms of gastritis become weaker, the mucilaginous fluids to which the patient has been restricted may be exchanged for such as are more nourishing, even slightly tonic. We must proceed cautiously, yet with more anxiety, to find out what may suit each individual case, than to conform to any theoretical rule.

Acidulated drinks, barley water, gruel, rice water, panada, boiled rice, will be proper in the first place; then mild bitters, as camomile, chalybeate waters, milk, &c. This will enable the patient to return sooner, and with more safety, to his ordinary diet, and will prevent the stomach from falling into a state of too great atony; but it must be continually kept in mind, that the greatest care is necessary in regulating the diet of convalescents, and that instances of relapse daily occur, in consequence of giving nourishing food too soon.

When gastritis has passed into a chronic stage, and the stomach is incapable of supporting almost any kind of food, it is necessary to be still more particular in our choice; the diet must be varied till we discover that which best agrees with the stomach, while we endeavour by frictions with the dry hand, or with oil, by exercise, change of air, and keeping open a blister on one of the extremities, or even the epigastrium, to lessen the morbid irrita-

bility of the stomach, and restore its lost powers of digestion. Lastly, if every thing else fails, a last resource is in a powerful counter-irritation, excited by means of tartar-emetic ointment, or escharotics.

In some instances, the employment of purgatives, by stimulating the large intestines and unloading them of fecal accumulations, is remarkably useful in chronic inflammation of the stomach, especially in persons habitually costive, or of a lymphatic temperament. The best way of administering purgatives in these cases is by injection, but we must not persevere in their exhibition, unless some benefit seems to be derived from them.

Instances have occasionally been met with, in which cold bathing, affusion, and a cooling regimen, have succeeded, after all the remedies above enumerated had been tried in vain.—(See also *Gastrodynia* and *Gastro-enteritis*.)

GASTRODYNIA.

When a patient complains of a very severe pain in the stomach, unaccompanied by any decided evidence of inflammation in this organ, as a florid hue of the tongue, fever, or loss of appetite; and when, notwithstanding, digestion is not prevented, and pressure, so far from aggravating, rather diminishes the pain, the principal indication is to alleviate the patient's suffering, and enable him to sleep, by the exhibition of opium, hydrocyanic acid, extract of hyosciamus, or laudanum: we must select such of these medicines as seem to agree best with the stomach; should it be incapable of supporting any of them, they may be administered by the rectum, or through the skin deprived of its cuticle. We have often had occasion to observe the good effects

of ammonia, extract of aconite, and the sub-carbonate of iron, especially when neuralgia of any part has preceded the developement of gastrodynia, a circumstance which strengthens the probability of its non-inflammatory nature.

In some cases, the application of leeches and cupping glasses to the epigastrium, with very hot poultices, or sinapisms to the back, may be beneficial; but remedies of this kind should be regarded rather as palliative, than as capable of curing the disease. Nevertheless, they should not be neglected whenever the violence of the pain makes it advisable to try every thing which is in the least likely to be beneficial.

The gastrodynia which so generally accompanies leucorrhœa, requires the exhibition of bitters, the preparations of iron, infusion of hops, gentian, chalybeate waters, extract of taraxacum, combined with iron filings, &c. Except in patients of a plethoric habit, the uneasiness of the stomach generally disappears pretty quickly under this treatment, while the discharge from the vagina at the same time diminishes.

A feeling of heat in the stomach or *cardialgia*, and *pyrosis* or the vomiting of a limpid fluid, principally occurring in the morning, will generally yield to the employment of twenty grains of magnesia daily, alone, or combined with sulphur; or still more certainly, to the subnitrate of bismuth, in doses of six or eight grains, three times a day; unless the symptoms of which the patient complains depend on some organic disease, a point which ought always to be previously ascertained.

Lozenges of carbonate of soda, powdered charcoal mixed up with sirup or honey, and taken by spoonfuls occasionally, lime water combined with infusion of camomile or rhubarb, chalybeate waters, some species of salad, &c. are all extremely beneficial in such cases.

Attacks of vomiting occurring in persons otherwise enjoying good health, and without any precursory or accompanying symptom of gastric irritation, are in general easily checked by giving antispasmodics; thus we may prescribe with great advantage a few drops of the tincture of opium and ether, some aromatic water, the acetate of morphia, tincture of castor, assafœtida, musk, &c. Much benefit likewise is often derived from mineral waters and ices; from the application of ice to the epigastrium; dry cupping in the same region; passing a galvanic current from the vertebral column to the pit of the stomach, and the administration of injections, containing a drachm of assafœtida.

If, however, these nervous vomitings continue for a long time, the permanent application of a blister, or the insertion of an issue or seton at the epigastrium, or at one of the extremities, will be required, in order to prevent any organic disease of the stomach, which the repeated exertion of vomiting might otherwise occasion.

The habitual costiveness which so very commonly attends cardialgia and pyrosis, is best obviated by mild laxative suppositories, or by injections of one or two ounces of oil of almonds; the frequent use of copious injections should be avoided, as tending to increase the atony and torpor of the bowels; and, when necessary, they should be cold, and not of a mucilaginous nature. Neutral salts, in the opinion of some physicians, are very injurious.

With respect to diet, it is less important to follow any fixed rule, than to ascertain what appears to agree best with the stomach; every thing which causes flatulence should be avoided, and, in general, preference should be given to rice, salep, white meats roasted, certain kinds of fish, as soles, trout, whittings, fruits thoroughly ripe or preserved; wine, beer, mineral waters, &c. may be allowed, if they

do not offend the stomach; but, in some cases, nothing seems to agree with it so well as pure water. The simple practice of taking every article of diet cold, has often removed every symptom of gastralgia. The same may be said of taking an ice after meals. Lastly, we should endeavour, by every kind of amusement, company, travelling, &c. to divert the attention of the patient from his complaints, and to diminish the morbid irritability of the stomach, by recommending habits of active exercise, residence in the country, warm or cold bathing, and friction of the skin.

It is unnecessary to say, that excesses of every kind should be guarded against, and that whenever gastrodynia follows the suppression of any habitual discharge or cutaneous eruption, it is necessary to re-establish it, or supply its place by an issue.

SCIRRHUS. CANCER OF THE STOMACH.

The treatment of scirrhus, or cancer of the stomach, extends no further than to the palliation of its most distressing symptoms; and the physician must be satisfied if he can retard and render tranquil the passage to the tomb. For this purpose the patient should, in the first place, be removed as much as possible from the influence of every thing prejudicial; he must abandon his occupation, if calculated to favour the progress of the disease, as is that of cooks, shoemakers, hatters, clerks, &c. When the affection of the stomach appears to have supervened on the metastasis of any constitutional disorder, proper remedies to supply the place of it should be exhibited; a severe regimen is indispensable; a very small quantity of food being allowed, and that of the lightest and least stimulating description, as, for instance, milk, farinaceous

vegetables, and white meats. The patient must drink nothing but water, either pure, or as in mineral springs; an issue inserted in the epigastrium or arm is very beneficial; the surface of the body should be covered with flannel, and every other precaution calculated to maintain the general health, ought to be adopted.

It would not be right to pass over in silence, a plan of treatment from which we have witnessed the happiest results, and which does not interfere, but may be employed in conjunction with external remedies, as the insertion of issues, &c. It consists in depriving the stomach of aliment; the patient being supported merely by nutritive injections, administered more or less frequently, according to his wants. The great advantage of this method is, that the stomach, by being allowed a long interval of perfect rest, has time to recover from the irritation which has been excited in it. The patient's strength will be sufficiently maintained, by a very nutritive, and at the same time, tonic diet; as of strong broths, soups, sugar, wine, &c.; nothing being taken into the stomach, except simple water. One instance, among several, in which this method of treatment has been followed by complete success, has been published by the author in the *Bibliothèque Médicale*, tome i., année 1820.

If the patient makes any complaint of pain in the epigastrium, it will be proper to try once or twice the application of leeches, and modify our subsequent treatment by the success of the experiment.

These different measures, if put in practice and well persevered in, before the supervention of vomiting and sour or fetid eructations indicates a very advanced stage of the disease, may, in some cases at least, prevent the progress of scirrhus, and ultimately make it safe to allow the patient to return to a more substantial diet.

But after scirrhus has proceeded to ulceration, and has occasioned great emaciation and debility, it is scarcely allowable to subject our patient to further suffering by any severe measures; it is, however, proper to recommend him to live on farinaceous vegetables and iced milk, or, if the pylorus will not admit the passage of food, the injection of nutritive substances must be substituted.

When the patient complains much of sharp lancinating pains, and is unable to sleep during the night, the administration of opium, hyosciamus, &c. by the rectum, will prove very serviceable.—See also *Gastritis*, *Gastrodynia* and *Hypochondriasis*.

HÆMATEMESIS.

Hæmatemesis occurring in a strong and plethoric habit of body, or supervening on the sudden cessation of the menses, or a hæmorrhoidal flux, requires, first of all, the copious abstraction of blood from the arm, and then the application of leeches to the anus or vagina, according to the nature of the suppressed discharge.

If, notwithstanding, the hemorrhage continues, the epigastrium should be covered with pounded ice, dry cupping glasses affixed to the thighs, and the patient directed to drink very cold acidulated liquids which may also be administered by the rectum.

But if faintness comes on, and the body becomes cold, the whole surface, especially the thorax, must be rubbed with stimulating tinctures, camphorated spirit, cau de Cologne, &c. The application of sinapisms to the feet, knees, and legs, and even of boiling water to the epigastrium, may be resorted to, and the patient should drink large quantities of a strong decoction of cinchona or rhatany, until the hemorrhage has ceased. A tobacco injection

may also be administered. But if the vomiting of blood is occasioned by the bursting of some tumour or large blood vessel, all attempts to restrain it will probably prove equally ineffectual.

Hæmatemesis, occurring in a feeble scorbutic habit, requires, on the contrary, a tonic treatment : thus, mineral and vegetable acids, decoctions of cinchona and rhatany, cold bathing, and stimulating frictions, are the most suitable remedies. When consequent on cancerous ulceration of the stomach, and therefore incurable, the strictest attention to diet must be enjoined, as well as the other measures before recommended.

In every case it is advisable, after the flow of blood has been checked, to guard against its return by a careful regimen, and by continuing for a considerable time to take acidulated and astringent fluids.

GASTRO-ENTERITIS.

So long as the symptoms of gastro-enteritis are indistinct, and consist only in a slight degree of head-ache and fever, with loss of appetite, wandering pains in the abdomen, and diarrhœa, nothing more is necessary than to confine the patient to his bed, prescribe a low diet, and mucilaginous or acidulated drinks, according to his inclination. Under this simple treatment, all the symptoms will probably disappear in a few days ; while active measures, by disturbing the general health, might occasion more serious consequences than the disease itself, which in this slight degree tends spontaneously to its own cure.

But when pain in the abdomen is very severe, the tongue red and beginning to get dry, and the

stomach with difficulty retains any food; when, moreover, the patient complains much of thirst, the abdomen feels hot to the hand, and diarrhœa exists to a great extent, it is necessary to apply fifteen or twenty-five leeches to the seat of pain, covering the abdomen after they have fallen off with a large poultice; and at the same time administering an injection of bran or starch. The application of leeches, though in a smaller number, should be employed a second, and even a third time, if any pain in the abdomen, fever, and diarrhœa continue: in this last case, it will be better to apply the leeches to the anus.

If, from the commencement of the attack, there is great febrile reaction, with a hot skin, and if the patient is young, robust, or of a sanguine temperament, it will be advisable to open a vein in the arm, rather than to rely altogether on local bleeding; we shall thus most certainly prevent the development of inflammation in any other organs, as well as arrest its progress in those already affected.

When an inflammatory condition is strongly marked, the blood being covered with a fibrinous crust, and the pulse hard and full, venesection should again be practised. The evening exacerbation of fever may be moderated by the use of warm baths, unless they appear to aggravate the abdominal disorder; and on this condition also, we may recur to the application of leeches, especially at the epigastrium and right iliac region, as long as the continuation of the pain renders it necessary.

If the heat of the surface of the body is extreme, while the skin is arid, the tongue red, dry, and beginning to be covered with a black crust, the pulse very quick, small, or wiry, and, if along with these symptoms a tendency to stupor exists, it will be proper to employ a warm bath, and afterwards cold affusions to the head, provided that there is no thoracic

affection, and defer the abstraction of blood until the reaction occasioned by the bath is fully established; then, if the disease has existed during a few days only, one bleeding should be made from the arm, and leeches afterwards applied to the abdomen, succeeded by cataplasms, and emolient fomentations; diluents should be freely administered, and even pure water, if other liquids seem to disagree with the patient. Under this treatment, we have very frequently observed the mouth become clean, the tongue moist, and the skin soft, almost immediately, while the subsequent local antiphlogistic measures destroyed the abdominal inflammation, in a much shorter time than would have been otherwise required.

But, when gastro-enteritis has already continued during several days, as eight or ten, and stupor and prostration of strength have supervened, the tongue and teeth being incrustated with sordes, the skin dry, and the pulse small and frequent; at this advanced period, the abstraction of blood would probably increase the debility already existing, and, if it did not throw the patient into a state of fatal collapse, promote ulceration in the parts exposed, by lying in bed, to constant pressure, as is especially the case with the integuments of the nates. Moreover, it must be borne in mind that this disease is very frequently attended, in a greater or less degree, with ulceration of the bowels, and that their cicatrization requires a certain degree of vital power, and a considerable space of time; also, that though the inflammation may have been overcome, the system is not in consequence restored to its former healthy condition; the evil has operated, and it is necessary to remedy it.

We therefore recommend the utmost caution at this period of gastro-enteritis, concerning the proper management of which there is even now considera-

ble difference of opinion : from very extensive opportunities of observation at the Hôtel-Dieu, we have been led to prefer, before all others, the following method of treatment.

First of all, the patient is placed in a warm bath; his ordinary beverage is made gradually more tonic, by adding a small quantity of wine; or two or three grains of sulphate of quina are taken in a pint of lemonade, some light mucilaginous fluid, or very weak beer: sometimes, however, it happens that all these liquids are rejected, and that water only will stay on the stomach. If we observe that the tongue ceases to get drier, it is proper to continue this plan of treatment by the exhibition of the sulphate of quina, ether, and camphor, carefully regulating the quantity according to the effect produced. In the mean time, a succession of blisters is to be kept up at the extremities, especially in those parts which, as the inner side of the thighs, are least liable to be compressed; for, in the state of prostration into which the patient is sunk at this period of the disease, the mere weight of the body is often sufficient to occasion gangrene. Friction with aromatic tinctures, or spirit of camphor, should be practised over the abdomen, and care taken that the contents of the bladder are evacuated two or three times during the day; the mouth is to be repeatedly moistened with slices of lemon.

It is better to avoid, as much as possible, a combination of many remedies, and even to employ each one singly, otherwise it is impossible to refer to their true source the effects which may be produced.

As soon as the pulse and general condition of the patient will admit, the employment of leeches and the warm bath may be resorted to, if necessary; but their repetition should depend upon the benefit derived from them.

In every severe case, when the least improvement is manifest, and there is any probability of the patient's recovery, the medicines which he is taking at the time, whatever they may be, should be continued, for any alteration might be followed by fatal consequences. Nature will do better without the interference of art, and the physician must be satisfied to resign altogether into her hands the management of his patient, taking care however to remove every thing that may obstruct the progress of returning health. If there should be excessive diarrhœa, it will be proper to prescribe demulcents, and injections of starch, with a small quantity of the tincture of opium.

While no ulcer has yet been formed on the sacrum, it may often be prevented by directing the patient to lie alternately on his right and left side, otherwise it is very apt to occur during convalescence from a severe attack of gastro-enteritis.

When this inflammation is only in its second stage it sometimes happens that the brain becomes sympathetically affected, the patient complaining of headache, his face being flushed, slight confusion in his ideas, and stupor, being apparent; in this case, no time should be lost in employing cold affusion to the head, and applying leeches behind the ears: even venesection will be advisable, if the patient's strength is sufficient. (See *Arachnitis*.)

When any other important symptom is superadded to those of gastro-enteritis, as a head-ache which obstinately resists the abstraction of blood, hiccough, vomiting, pain in the chest. &c., the most active measures must be employed for its removal, otherwise it will so retard the progress of recovery, that the patient will sink before it can be effected. A blister, dry cupping, a warm bath, or antispasmodics, as camphor, musk, or cinchona, will often at

once remove these unusual and inexplicable symptoms.

When gastro-enteritis arises under the influence of debilitating circumstances, as the want of proper food, exposure to an unhealthy climate, damp weather, an enfeebled constitution, a lymphatic temperament, or a bilious habit of body, a simple antiphlogistic treatment is not the most successful; on the contrary, at any period of the disease, if the tongue is covered with a thick yellow fur, and there is a disagreeable bitter taste in the mouth, it is incontestably established by experience, that the administration of an emetic of ipecacuanha, and an injection of tartarized antimony with some neutral salt, effects, in most instances, the speedy removal of the abdominal symptoms, the head-ache and fever. Some physicians have greatly exaggerated the danger of this method of treatment; but the human body, which does not lend itself to the support of systems and theories, furnishes daily opportunities for seeing that tartarized antimony does not always provoke, any more than the abstraction of blood always removes, gastro-enteritis; the rules of art must submit to the empiricism of nature. It must, however, be allowed, that where much diarrhœa is present, we should hesitate to employ the evacuating system, or at least do so with extreme caution, so as to discontinue it as soon as its action appears prejudicial.

In feeble, lymphatic, or sluggish habits, the use of mucilaginous and demulcent diet-drinks, and warm baths, appear rather to prolong the complaint; in such cases, therefore, a more stimulating plan of treatment may be adopted with advantage, and the use of bitters, aromatic and chalybeate waters, should be prescribed: the application of a blister to one of the extremitities is an equally beneficial remedy in cases of this description. Diarrhœa is

counteracted most effectually by injections of starch, with eight or ten drops of the tincture of opium; but if it is profuse, and does not yield to these enemata, it will be necessary to apply a few leeches to the anus, unless the patient is too feeble to allow the abstraction of blood; when it has become chronic, ipecacuanha, cinchona, quassia, calumba, &c. are indicated. We have even known instances, in which tartarized antimony, in doses of one or two grains, has checked diarrhœa when passing into a chronic state.

A point of the highest importance in the treatment of gastro-enteritis, is the regimen of the patient. So long as the inflammation is acute, and attended with fever, it is impossible to be too severe; during the whole of the period of the disease, no nourishment whatever can be permitted, unless it continues a very long time, in which case, we may relax a little, and allow the patient to take slops made gradually more and more nutritious, as barley water, gruel, toast water, milk and water, chicken broth, and veal broth, provided that the diarrhœa is not aggravated.

It must be constantly borne in mind, that persevering abstinence is the most efficient and useful auxiliary to which the physician can resort; yet, when the stomach is capable of supporting food, rice and milk, arrow root, sago, salep, and cooked or thoroughly ripe fruits should be given in very small quantities: even then, until convalescence is perfectly established, the utmost caution is requisite, and it must not be forgotten that relapses, in consequence of errors in diet, are extremely frequent, even more so perhaps than is generally thought. Whenever, therefore, diarrhœa returns, or the pulse becomes more frequent towards evening, the patient must immediately be subjected to a stricter regimen.

We shall now briefly recapitulate the rules which we have laid down for the treatment of gastro-enteritis. When the attack is slight, nothing further is necessary than the copious use of mucilaginous diluent fluids, but when attended by considerable fever, pain, and diarrhœa, leeches must be applied over the abdomen, to restrain the severity of the disease; and, if the robust habit and age of the patient, the intensity of the fever, and other accompanying circumstances, afford reason to fear that inflammation may extend to other organs, it will be advisable to draw blood from the arm.

By pursuing these measures, we may hope to prevent the disease from assuming that adynamic character in which stupour, prostration of strength, and a vitiated condition of the secretions of the mouth, render our treatment so embarrassing. But even in this stage of the disease, it should be attacked by the measures above pointed out, if it has not existed many days, and the abstraction of blood has not previously been resorted to; previously, however, employing baths and effusions, unless the thorax is affected.

It is also at this period that the application of blisters to the extremities is particularly useful. If the prostration of strength increases in consequence of, or, at least, notwithstanding, local bleeding, and if the disease has existed long, a tonic treatment must be combined with that more strictly antiphlogistic. In fact, on whatever principle our management of this inflammation may be founded, it must always be regulated by its results: great simplicity of prescription is therefore necessary, each remedy being employed singly, in order to ascertain with exactness its operation.

Lastly, when the application of leeches would, in all probability, only hasten the death of the patient, warm baths may still be advantageously employed

to diminish the frequency of the pulse, moisten the mouth, and promote perspiration. Such are the principles of the treatment of acute gastro-enteritis.

The cure of chronic inflammation of the stomach and bowels, consists in the observance of a strict regimen, occasional warm bathing to restore the functions of the skin, the permanent application of blisters in one of the extremities, employment of frictions over the whole surface of the body, sulphureous baths, mild demulcent drinks, and, if diarrhœa exists unattended with fever, chalybeate waters.

CHOLERA MORBUS.

When cholera morbus comes on with the symptoms of sub-acute gastritis, it requires the same treatment as this inflammation, that is, the frequent application of leeches to the epigastrium and anus, local being better than general bleeding, unless the patient is very plethoric; indeed, however doubtful may be the nature of this disease, whether consisting in a depraved condition of the bile, or in an affection of a different kind, it is certain that the mucous membrane of the alimentary canal becomes before long inflamed. On account of the extreme irritability of the stomach, which is such as scarcely to allow any liquid to remain in it, it is necessary to employ the most powerful sedatives, and especially cutaneous stimulants; thus, the internal and external exhibition of ice, the application of cupping glasses and sinapisms to the epigastrium, the administration of the tincture of opium and acetate of morphia, are indicated. Much larger doses of these medicines than are usually necessary must be employed in this disease, as, for instance, twenty, and twenty-five

drops of the tincture of opium, or a quarter of a grain of the salt of morphia, taking care, however, gradually to diminish the quantity in proportion as the symptoms become less severe; effervescing draughts and ether often succeed in checking vomiting; also the infusion of calumba or rhatany, and opiate injections, containing ten or twelve drops of laudanum; the application of sinapisms and blisters to the extremities, and hot fomentations over the abdomen; friction with aromatic tinctures, [and, above all, the hot air bath] should be employed to preserve a due heat on the surface.

When there is severe vomiting and muscular spasm, conjoined with a constant tendency to syncope, it is necessary to apply boiling water to the abdomen, and, if possible, excite the action of the heart, otherwise death will soon ensue: for this purpose, cold affusions are extremely useful, but they would be attended with too much danger if the heat of the skin were greatly diminished, and reaction difficult; in this latter case, rubbing the body with aromatic tinctures may be resorted to.

In the cholera morbus which prevails epidemically in certain countries, as in every other extremely dangerous disease, the most opposite and empirical remedies have been prescribed, as, for instance, oil of camphor, ammonia, sulphate of soda, musk, ether, &c.; but, hitherto, not a single step has been made towards a rational plan of treatment. It ought, doubtless, to be founded on the nature of the disease, and, if it is inflammatory, the common antiphlogistic treatment, modified according to peculiarities of climate, is as applicable to it as to any other inflammation.

When cholera morbus arises in consequence of having taken poison, or certain kinds of food which prove poisonous, in consequence of some personal

idiosyncrasy, our first object should be the evacuation of the alimentary canal; afterwards the management of the case is to be conducted on ordinary principles. (See also *Poisoning*)

After we have succeeded so far as to remove the most urgent symptoms, nothing further will be necessary than the employment of acidulated and demulcent drinks, cold aromatic infusions, bathing, and the strictest attention to diet. As soon as the patient is convalescent, a small quantity of Spanish wine may be safely allowed if the stomach can support it.

ENTERITIS.

A slight attack of enteritis commonly requires nothing more than the use of diluents and demulcents, large emollient cataplasms over the abdomen, warm baths, and a low diet. But if the inflammation does not yield to those simple measures, or if it assumes from the first a more serious character, the application of leeches to the abdomen is necessary, and must be frequently repeated so long as any pain exists; even general blood-letting should be resorted to when enteritis is attended with high fever. This inflammation, however, seldom exists uncombined with gastritis, we may therefore refer the reader to *Gastro-enteritis* for further details.

When inflammation of the bowels is passing into a chronic state, counter-irritation is to be excited over the abdomen, by antimonial ointment, and in the extremities, by a repetition of blisters; friction, either with the dry hand, or with oil, should be practised over the whole surface of the body, and sulphureous baths frequently employed, when

there is opportunity, and the patient should gradually exchange the mucilaginous drinks to which he was restricted while the inflammation was acute, for a more tonic regimen; thus, chalybeate waters may now be taken with advantage, a little wine ventured upon, and even light solid food, in very small quantities, and scrupulously selected, so as to avoid every thing calculated to excite irritation in the bowels; lastly, he should remove into the country, and there take as much exercise in the open air, as he is able to support without inconvenience.

Enteritis occurring in infancy, a frequent and very dangerous affection, in consequence of its tendency to terminate in gelatinous softening of the mucous membrane, requires the employment of warm baths and emollient cataplasms, and the frequent application of leeches, while the inflammation is acute and attended with fever; but the efforts of the physician will be ineffectual, if he does not take care that his infant patient receives proper nourishment; such as the breast of a healthy nurse can alone supply. We have frequently had occasion to observe the very beneficial effect of the application of sinapisms to one of the extremities, during a quarter of an hour or twenty minutes, repeated several times in the course of the day; blisters also, when febrile reaction is on the decline, are very useful, especially in preventing relapse.

CÆCO-COLITIS—DYSENTERY.

When any portion of the cæcum, or colon, is attacked with pain, the application of leeches is necessary until it is removed, or at least very

greatly diminished, unless, as occasionally, though very rarely happens, this mode of treatment has evidently no influence over the complaint: at the same time, the abdomen should be covered with emollient cataplasms, or if pain is occasioned by their weight, flannel cloths, wrung out of hot mucilaginous decoctions, may be substituted; embrocations, consisting of hot oil and laudanum, are to be rubbed over the abdomen, and if the patient is capable of the motion, he should be placed in a warm bath for a long time, taking care to avoid cold. Together with these measures, and especially in cases attended, as most are, with severe pain, some preparation of opium should be administered, either by the stomach, or in injections. Five and twenty minims of laudanum, a grain of the acetate of morphia, or the resinous extract of opium, will fulfil the double indication of alleviating pain in the bowels, and moderating the very frequent inclination to evacuate the bowels; also, the ineffectual straining, which only aggravates the uneasiness. When the patient is tormented with excessive tenesmus, or when there is an abundant diarrhœa, the application to the anus of twenty leeches, will prove the most effectual anodyne, and injections of bran, or starch, with six, eight, or ten minims of laudanum, may also be employed; but the use of enemata must not be persevered in, if no relief seems to be derived from them.

When there is acute inflammation of the colon, it will be advisable to administer them cold; they quench the fire which is raging within. On the other hand, perspiration is to be promoted by drinking copiously hot liquids, of a demulcent and slightly astringent nature, such as the decoction of althœa or symphytum, rice water, mucilage, &c. The strictest abstinence is necessary, and no kind of nourishment, except such liquids as we have

mentioned, should be allowed while any pain in the abdomen or diarrhœa remains, or there is any reason to apprehend a relapse. Afterwards, the patient may return very gradually to his ordinary diet, beginning with milk and water, barley or rice water, then salep, arrow root, tapioca, rice, &c. After some time, chicken broth, beef tea, &c. in small quantity at first, may be taken with safety and advantage. Where the patient is plethoric, or the fever ardent, it will be prudent in the commencement of the attack, to draw blood from the arm, rather than depend wholly on local bleeding.

Whenever in inflammation of the large intestines blood is mixed with the stools, the application of leeches to the seat of pain and to the anus, is the more necessary, and must be the more frequent: the treatment required in other respects, is exactly the same.

As soon as the disease has passed through its acute stage, the pain having almost disappeared, while the diarrhœa continues nearly to its former extent, and the patient is sinking into a state of great debility, we must endeavour, by the administration of tonics, to recruit his strength; however, great caution and vigilance will be necessary to watch and guard against the renewal of inflammation. For this purpose the sulphate of quina, or moderate quantities of Spanish wine and catechu, may be taken with advantage. If any disorganization, as ulceration, for instance, has taken place in the intestines, all that the physician can do, is, by a well regulated regimen, to remove every obstacle out of the way of nature's curative processes.

When dysentery is complicated with gastro-enteritis, encephalitis, or arachnitis, the treatment must be modified, according to the predominance of one or other of these affections. See the words *Arachnitis*, *Encephalitis*, *Gastro-enteritis*, &c.

In debilitated constitutions, a chronic diarrhœa very frequently exists, which though unaccompanied by any evidence of irritation, is clearly referable to an ulcerated state of the bowels. In cases of this description, a nourishing but very light diet is indicated. Wine may be taken in small quantity, and the whole round of astringents, if necessary, may be resorted to; as, for instance, infusions of bistort, quassia, tormentil, calumba, acidulated and chalybeate waters, ipecacuanha, cinchona, the extract of rhatany, conserve of roses, and kino; occasionally, perhaps, it will be proper to try the effect of an emetic, and even a purgative. Astringent and opiate injections, wearing flannel next to the skin, friction, blisters applied to the inner side of the thighs, vapour baths, long continued carriage exercise, and compression of the abdomen by means of a bandage, are all means likely to prove of benefit.

Inflammation of the large intestines, occurring in infants, should be attacked during its acute stage by leeches, fomentations, cataplasms, emollient injections, and warm baths. If there is very little or no fever, the frequent application of sinapisms, which should be kept on for half an hour at each time, will be highly beneficial; blistering the extremities will answer the same purpose. As for food, every thing must be prohibited except the nurse's milk, if the child is still at the breast; or if otherwise, mucilaginous drinks, sweetened with a small quantity of sirup of poppies.

The temporary diarrhœa which is apt to occur during dentition, if unattended with any evidence of irritation, requires nothing further than a well regulated regimen.

SCIRRHUS, CANCER OF THE INTESTINES.

The treatment of scirrhus and cancer of the intestines differs very little from that which has been described while speaking of scirrhus of the stomach and chronic enteritis ; it is, however, more important to prescribe occasional aperients, especially injections of oil, in order to prevent the accumulation of fecal matter, the common attendant on stricture of the bowels. When there is much pain, narcotics, especially preparations of opium, should be administered.

Should any symptoms of inflammation arise, the application of a few leeches to the abdomen, or anus, and the use of the warm bath, should be resorted to. It is always prudent, in this disease, to establish an artificial discharge, by inserting an issue in one of the extremities, or rather in the abdomen, near the seat of disease.

In regard to diet, every thing which occasions flatulence must be carefully avoided, the patient should be restricted to the lightest food, and take that only in very small quantities.

NERVOUS COLIC—ENTERALGIA.

This affection may generally be removed by the employment of warm baths, injections of oil, and hot fomentations or cataplasms over the abdomen ; or, when these measures fail, by opiates, and a few minims of ether, given in some aromatic water. See *Gastralgia*, also the following chapter.

COLICA PICTONUM.

Different methods of treatment have been adopted in this disease, the principal of which we shall now describe, pointing out by the way the modifications and variations which circumstances may render necessary. Let us commence by detailing the plan to which both authority and daily experience unite in assigning the highest rank.

Plan of treatment at *La Charité*.

First Day.—A purgative enema is administered, consisting of a pound of infusion of senna and half an ounce of magnesia and emetic wine. In the course of the day, the patient takes sixteen ounces of a decoction of cassia, containing three grains of tartarized antimony, and an ounce of the sulphate of magnesia; in the evening, an anodyne injection is prescribed, and lastly, the following pill:

R Theriacæ, Opii ana granum.

Second Day.—An emetic, consisting of three grains of tartarized antimony dissolved in four ounces of water, is to be taken twice, with the interval of an hour between the two doses. Vomiting is promoted by drinking copiously warm water, and nothing more is prescribed during the day, except a diaphoretic drink, containing guaiacum, sarsaparilla, sassafras and liquorice, and the repetition, in the evening, of the anodyne injection and pill.

Third Day.—The above drink is continued, with the addition of six drachms of senna to each pint of it, which is to be taken in four doses: afterwards, the diaphoretic mixture is to be taken alone. At four o'clock in the afternoon the purgative enema is repeated; at six, the anodyne enema, and at night the opium pill.

Fourth Day.—An eight-ounce purgative mixture is administered; (infusion of senna six ounces, sul-

phate of soda half an ounce, salep a drachm, and sirup of buckthorn an ounce) the operation of this medicine is to be promoted by diluents. The diaphoretic drink, the anodyne enema, and pill, as before.

Fifth day.—As on the third, namely, a combination of the infusion of senna and diaphoretic mixture: at four P. M. the purgative enema, at six, the anodyne enema, and at eight, the opium pill.

This plan has been variously modified by different practitioners: thus, some administer emetics more frequently, especially in cases attended with nausea and a disordered state of the stomach; others omit the anodyne enema, and especially the opium pill, on account of their rendering the constipation more obstinate, and chiefly endeavour to restore and maintain the alvine evacuations.

Should the abdominal pain not yield, the employment of purgatives must be persevered in until the eighth, tenth, or even twelfth day. And it will not be safe to conclude that we have destroyed the disease, until, for at least a week, and with the omission of all medicine, except the diaphoretic diet drink, the patient has remained free from pain, and the action of the bowels has been regularly kept up.

In very severe cases of colica pictonum, when the pulse is frequent, the tongue of a florid hue and unnaturally dry, and when abdominal pain, instead of being diminished, is greatly aggravated by pressure, an antiphlogistic plan of treatment is clearly indicated; a vein should be opened in the arm, and leeches, to the amount of fifty or sixty, afterwards affixed over the abdomen, around the umbilicus: the employment of cataplasms, and of warm baths, in which the patient should remain a long time, must follow the abstraction of blood. These measures are equally proper, when pain in the abdomen persists, in spite of the treatment adopted at *La*

Charité. Our own experience fully authorizes us to make this assertion.

When the bowels are obstinately constipated, and the administration of purgatives would be attended with danger, it will be proper to try the plan lately proposed by Professor Andrieux; it consists in directing a galvanic circle towards the two extremities of the intestinal canal, so as to excite its peristaltic action and unload it of its contents.

A method of cure has been recommended by Dr. Ranque, Physician of the Hôtel-Dieu at Orleans; which, from the numerous instances in which it has proved successful, has a strong claim to attention; we shall therefore enter into a particular description of it.

Plan of Dr. Ranque.

First Day.—The patient is first placed in a warm bath, so as to render the skin more permeable to the topical remedies applied to it, and more susceptible of their influence: after leaving the bath, the whole surface of the abdomen is covered with a plaster composed of resin and conium plaster, of each an ounce and a half, treacle half an ounce, camphor a drachm, and sulphur half a drachm; this plaster is spread on linen cloth, and the surface is sprinkled over with a drachm of camphor, the same quantity of tartarized antimony, and half a drachm of sulphur; the whole lumbar region, from the eleventh dorsal vertebra to the sacrum, is encased in a similar manner, except that the surface of the second plaster is covered only with two drachms of camphor: at the same time, the thighs and legs are rubbed with a liniment, composed of two ounces of distilled laurel water, an ounce of sulphuric ether, and two scruples of the extract of belladonna; the half of this liniment being used in the space of twenty-four hours. When the bowels are constipated, an enema, containing thirty minims of the tincture of belladonna.

and four ounces of olive oil, is administered. Lastly, abstinence is to be strictly enjoined, the patient taking nothing, except barley water, whey, or some demulcent fluid.

Second day.—In general, the pains in the abdomen are less severe, and vomiting has ceased: the liniment and the enema, if the bowels continue slow, are to be repeated, and no alteration may be allowed in the patient's regimen, unless the bowels have been freely opened.

Third Day.—In the great majority of cases, the colic no longer exists, or only in a very slight degree, and the alvine evacuations are re-established: the surface of the abdomen being now covered with small pustules, the plaster may be removed: the frictions and enema are to be continued. If the bowels are not open, the same regimen must be persevered in. But when the severity of the complaint is in no degree diminished, and little irritation has been excited in the skin, it will be necessary to have recourse to another plaster, similar to the first; or the application over the abdomen of a hot cataplasm, sprinkled with the powder employed on the plaster, may be substituted for it.

Fourth Day.—This new application has generally removed the pain; the plaster or cataplasm is to remain until it has excited the sensibility of the skin; the appetite now begins to return, and a little nourishment may be allowed. The pustular eruption over the abdomen is to be treated by refrigerating and sedative lotions.

If the hands and wrists are affected with paralysis, they are to be rubbed with the liniment before prescribed; if amaurosis supervenes, or pain in the head continues after the removal of the colic, the temples, forehead, and nucha, are also to be rubbed with it; lastly, if after the sixth day there is no return

of appetite, a gentle aperient, as castor oil, should be administered.

The tincture of *nux vomica* employed at an early period of *colica pictonum*, both externally by means of cataplasms applied over the abdomen, and internally in doses of twenty or thirty minims to a draught, and from ten to fifteen in enema, taking care to diminish this quantity, in proportion as the severity of the pain abates, has, in like manner, in several instances, been crowned with success. It is necessary, however, to remark, that the administration of this powerful medicine requires much caution.

The subsequent paralysis, which is so common, must be counteracted by blisters, applied along the course of the nerves, by stimulating liniments, and vapour baths. We have found the oil of turpentine, taken internally, an admirable remedy, in cases where paralysis of motion was connected with pain of the sciatic and crural nerves. Galvanism also has been very successfully employed by Professor Andrieux, in this description of paralysis, and the purgatives by various practitioners.

The prevention of *colica saturnina* is a subject of inquiry highly important to every person engaged in the manufacture of any of the preparations of lead; it should, therefore, be impressed upon those who are exposed to its attacks, that the only probability of immunity consists in a careful observance of the following directions. Linen dresses must be frequently renewed; the workman should often wash his whole body, and invariably before meals, his hands; he must be careful to protect his food from the dust of the manufactory, or workshop, to take his meals in some other place, not to continue in his employment during a longer period than a month at a time, and lastly, to abandon it altogether, after he has been once attacked by disease; for experience proves, that each attack renders the suf-

ferer more liable to another. Dryness, warmth, and a free circulation of air, are also highly important.

SCIRRHUS, AND CANCER OF THE RECTUM.

A large proportion of the organic diseases of the rectum may be prevented by the vigorous employment of antiphlogistic measures, by applying leeches to the anus, throwing up clysters of mucilaginous or narcotic substances, and establishing counter-irritation by the insertion of a seton or issue. When the scirrhus is connected with syphilis, it may be arrested in its incipient stage by antisyphilitic remedies, and by passing up into the rectum, a tent, smeared over with mercurial ointment.

But when scirrhus disorganization is perfectly formed, it will be necessary to resort to other means. Dr. Recamier has very recently proposed, in such cases, the employment of compression.

At the Hotel-Dieu, I have had several opportunities of observing the effects of this remedy. The way in which it is applied is by distending the rectum with pledgets of lint introduced one after another, until a gentle compression is established by means of these foreign bodies, which may also at the same time be made use of to convey medicine into the intestine; tents of prepared sponge, covered with the hydriodate of potash, and gradually made larger, may be employed for the same purpose. If any ulcers exist in the rectum, they should be cauterized with the aid of the *speculum*, by the nitrate of mercury, which is one of the best escharotics that can be chosen in such a case.*

* See the excellent Memoir of Palliard, *Sur les Caustiques*.

We may also, by means of a syringe, introduce into the rectum emollient cataplasms, and render them narcotic, if the pain is so severe as to render it necessary; they should be retained as long as possible.

The occasional application of leeches to the anus, may also prove highly beneficial at this period of the disease, but when the patient's strength is already greatly exhausted, a prudent practitioner will avoid the abstraction of blood, and prescribe instead cataplasms to the margin of the anus, and hip baths.

In the mean while, the trying pain which accompanies this disease, should, as much as possible, be alleviated by warm bathing, douching, narcotic injections, and the internal exhibition of the extracts of conium, hyosciamus, opium, lactucarium, acetate of morphia, laudanum; and one or other of these substances, combined with lard, should be used as an ointment around the anus. If the stricture of the rectum is so complete as to prevent the passage of the fæces, we must prescribe laxatives, and at the same time, dilate the canal by tents, made larger every time they are introduced; if necessary, even the application of escharotics may be resorted to.

In every case, it becomes necessary, for the purpose of opposing the progress of the disease, and alleviating the severe pain which attends it, to establish an artificial discharge, by the insertion of an issue or seton in the vicinity of the rectum, or in the loins.

Dr. Tavernier and myself, have lately had under our care a lady who for several years had been treated by very intelligent practitioners for cancer of the rectum, on examination of whose body after death, it was discovered that the violent shooting pains with which the patient was afflicted, especially on going to stool, were occasioned by the presence of a sharp spiculum of bone which had made its

way from the rectum into the adjoining cellular tissue, and there pressed against this intestine. The discovery of one instance of this kind, should put us on our guard against overlooking others.

The diet which it is proper to enjoin in this affection, should consist of such things as contain much nutriment in a very small bulk, so as to form as little feculent matter as possible; laxative drinks should also be employed, to prevent constipation.

HÆMORRHOIDS.

So long as hæmorrhoidal tumours in no degree disturb the health, and are only troublesome, it is better to leave them alone, and especially to avoid suddenly suppressing them, otherwise, serious and even incurable diseases may ensue, particularly if the hæmorrhoidal flux has existed a long time, and become as it were constitutional: in fact, it is then a new function, as natural to the body as menstruation; the system is placed under its influence, and health is ever afterwards dependent upon its regular performance.

The physician must be content to do nothing more than direct such regimenal precautions, as are calculated to restrain the discharge within due limits. Thus, the patient must be restricted, especially at the periods in which hæmorrhoidal congestion is most apt to recur, to a light diet, consisting of vegetables, white meats, fruits containing much acid, and refrigerating drinks; wine should be allowed only in very small quantity, and diluted with water; mild beer may often be substituted for it with advantage.

Patients afflicted with hæmorrhoids, should lie on a horse-hair mattress, and, if obliged to write, stand

up to do it ; they should sit as little as possible, and that only on hard cushions ; above all, regular exercise must be enjoined.

When this disease is attended with a sense of great heat and acute pain, considerable benefit may be derived from the employment of cataplasms and mucilaginous injections, as well as from the application of spermaceti ointment or fresh butter, either alone or mixed up with honey, taking care (a precaution which, however, cleanliness renders almost superfluous) that these oleaginous substances do not remain long enough to become rancid, and thus aggravate rather than diminish the patient's sufferings. Lastly, the bowels should be kept open by the use of laxative drinks.

If the hæmorrhoidal tumours are large, or the flow of blood from them considerable, the application of fifteen or twenty leeches in the vicinity of the rectum, will prove highly useful, especially if the patient is placed, as soon as the leeches drop off, in a warm bath ; cold injections and cataplasms, with douching, may also be employed to promote the same object. If the patient is plethoric, and there is reason to apprehend determination of blood towards any other organ, it will be proper to take a moderate quantity of blood from the arm.

We may sometimes effect their removal, by compressing them, one after another, with the finger, until they become perfectly flattened ; but to derive any permanent benefit from this operation, the frequent repetition of it will be necessary.

If the hæmorrhoidal tumours are so large as almost to block up the anus, and render evacuation of the fæces extremely difficult, or even impossible, we must endeavour to re-open the passage through the intestinal canal by the introduction of a caoutchouc sound, tents successively larger, and prepared sponge.

When the tumours project beyond the verge of the anus, that is, in external piles, they must be pushed back by the finger, previously anointed with some oleaginous substance, and then kept back by a pledget of lint or linen, sustained in its place by means of a T bandage.

The same measures must be resorted to when the hæmorrhoids become strangulated by the sphincter muscle of the anus; but in this case they should be preceded by the employment of the warm hip-bath, or the application of a poultice to the seat of disease, for the purpose both of facilitating reduction, and rendering it less painful. In either case, a roll of cloth should be attached to the middle of the chair in which the patient is accustomed to sit, to prevent the tumours from coming down again.

If the flow of blood is kept up by the presence of ascarides in the rectum, we must endeavour to clear the intestine of them, by simple and mucilaginous injections, and afterwards to prevent their formation in the manner described under the word *Ascarides*.

When the bleeding from piles is not excessive, it ought to be encouraged; but when it is so profuse as to occasion much debility, or occurs in patients of a bilious temperament, it will be necessary during the intervals to pay strict attention to the diet, forbidding every thing of a stimulating nature, or difficult of digestion, to prescribe diluents, emulsions, and bathing, to keep the bowels regularly freely open, rather by mild laxatives, such as the confection of cassia, tamarinds, lemonade; &c. than by the daily administration of warm injections, which often produce an opposite effect, by promoting a determination of blood towards the intestines. At the same time almost absolute rest must be enjoined.

Lastly, if the discharge of blood amounts to perfect hæmorrhage, all the resources of art must be

resorted to, in order to arrest it, the principal of which are venesection, cold applications, and especially plugging up the orifice of the anus.

It is scarcely necessary to remark, that this plan of treatment is applicable to those cases only in which the intestinal hæmorrhage is of an active character, and occurs in plethoric subjects; otherwise in good health; but in a lence-phlegmatic or scorbutic habit, or in persons of debilitated constitutions, we must pursue a very different course, in order to arrest it; the employment of tonics, rich wines, a nutritious food, chalybeate waters, cold bathing and injections, consisting of infusion of roses, cinchona, rhatany, punica granatum, &c.

INTESTINAL WORMS.

Daily observation teaches us that children, persons of a lymphatic temperament, and those who have been long subjected to a debilitating regimen, are liable above all others to the production of worms in the intestines; yet, on the other hand, it is no less certain that these insects often exist along with gastro-intestinal inflammation, and symptoms are continually attributed to their presence, which are occasioned solely by the existence of this inflammation. We would therefore recommend, that before the administration of any vermifuge whatever, for all of them are powerful stimulants, the condition of the alimentary canal should be ascertained; and when any traces of inflammation are detected, these medicines must be carefully avoided.

The number of substances to which has been ascribed the power of destroying and removing these entozoa, is immense; all of them, perhaps, have been occasionally successful; but as there are some

which may prove highly injurious, or which offer a less probable chance of success, we shall confine our attention to those, the utility of which experience has sufficiently demonstrated.

Ascarides Lumbricoides.—Infusions of the following substances, the polypodium filix mas, the root of the tanacetum vulgare, the seeds of the artemesia santonica, the leaves and tops of the juniperus sabina, the centaurea benedicta, and punica granatum; in like manner, lemon juice, animal oil, camomile, mint, valerian, camphor, assafœtida, muriate of ammonia, calomel, rhubarb, jalap, castor oil, and almost all purgatives, may be employed with advantage in destroying and removing these worms.

Ascarides Vermiculares.—The situation of these thread worms being in the rectum, they would scarcely, in any degree, be affected by the medicines which we have just enumerated as most effectual against the long round worm; for none of these vermifuges can kill the worms, which are protected by the feculent matter in which they are involved, and, although purging may effect the removal of some of them, it is not likely to dislodge them all, and can have no influence upon their reproduction. The method which has always appeared to the author best calculated to cure this most disagreeable complaint, consists in the complete expulsion of the ascarides from the rectum, and especially from the lower portion of it, where their perpetual motion excites an almost intolerable irritation and constant tenesmus. This object will not be attained by one injection; two or three, administered at short intervals, will be necessary. The first is, to unload the intestine of its fecal accumulation; the second, which should be cold, and consist of a solution of muriate of soda, or of chloruret of soda diluted, or vinegar and water, is to be retained as long as possible;

this is given with the design of killing and expelling the worms which may have been left attached to the mucous membrane of the rectum. Soon after this second injection, the third should be administered, consisting of three or four spoonfuls of oil, or, what is still better, a thick mucilage of linseed or marsh-mallow, which will fulfil the double indication of mitigating the uneasiness which might otherwise be occasioned by the few remaining in the rectum, and protecting the mucous membrane from immediate contact with those that may descend from the upper part of the rectum.

Another precaution, which in general, is by itself sufficient, when the ascarides are few in number, and do not occasion great uneasiness, is to solicit the action of the bowels regularly every morning, and to resist any desire to go to stool in the afternoon, otherwise, the pain and itching which in general begin towards night, come on at an earlier hour, and with much greater severity. Lastly, when other means fail, we must have recourse to injections.

Professor Brera has recommended a plan, which, although not calculated to remove the disease, is, at least, highly efficacious in mitigating the suffering which attends it: it consists in introducing into the rectum, a piece of lard or candle, which, in addition to the emollient property common to all oleaginous substances, possesses this advantage, that it can be drawn out, bringing along with it the greater number of the ascarides in the lower portion of the rectum.

The formation of worms is to be prevented by guarding against all inflammation of the bowels, and in this way, against the excessive excretion of mucus, in which it terminates: by causing, through a regular system of exercise, the muscular system to predominate over the lymphatic, prohibiting all

unwholesome, and indigestible food, and prescribing various tonics, such as chalybeate mineral waters, cinchona, rhubarb, gentian, &c.

Tænia.—The removal of the symptoms occasioned by the presence of *tænia*, is only to be accomplished by the expulsion of the worms. Among the substances capable of effecting this object, the bark of the *punica granatum* merits the highest rank. Indeed, the decoction of this substance has recently acquired such great reputation, that it would be wrong to employ any other remedy in *tænia*, before a trial has been made of this: the dose is two ounces of the bark, boiled in a pint of water; the decoction should be taken in the morning fasting, and succeeded by an ounce or an ounce and a half of castor oil, to obtain a free evacuation from the bowels. This is the mode of its employment recommended by Dr. Deslandes, a physician who has greatly added to our information on this point of therapeutics,* and the author can without hesitation affirm, that after having in several cases given the bark of the pomegranate in this manner, he has never known any bad consequences to result. It is proper to adopt the precaution of putting the patient on a low diet during the day in which this medicine is administered.

The powdered root of the male polypody is frequently successful in destroying *tænia*: it constitutes the celebrated specific of Madame Nouffer.

Very pure filings of pewter, a remedy extra-

* Observations sur l'emploi de l'écorce de grenadier, lues à Anthénée de Médecine, et insérées dans les bulletins de cette société, Nouvelle Bibliothèque Médicale, tome ix. p. 76, année 1825.

vagantly extolled by Alston and Block, may be resorted to in cases where other means have failed. The same may be said of sulphuric ether, muriate of ammonia, assafœtida, oil of turpentine, cold water, carbonic acid gas, the remedy of *La Chapelle*, which consists in the administration of five ounces of *huile de noix*, succeeded two hours afterwards by four ounces of Alicant wine ; these remedies being repeated for several days successively, until the worm is wholly expelled. The employment of it, according to Vetter, so entangles the tœnia, that a purgative is afterwards sufficient to effect its removal. It is almost superfluous to remark, that the destruction of this worm cannot be permanent until the head has been expelled.

The sympathetic and secondary symptoms occasioned by the presence of worms in the intestines, the principal of which are convulsions, vomiting, chorea, epileptic fits, head-ache, tinnitus aurium, cough, pains and cramp of the inferior extremities, &c., if accompanied by no other symptom, which can be regarded as indicative of any essential disease of the organ to which they are referred, will disappear on the removal of the cause,—the presence of worms. It is, nevertheless, proper in such cases, to combine with the more directly vermifuge medicines, the exhibition of valerian, opium, castor, oxide of zinc, extract of hyosciamus, camphor, &c., also the employment of the tepid bath.

DISEASES OF THE LIVER.

ICTERUS.

WHEN an attack of icterus is recent, has come on spontaneously, and is unaccompanied with pain in the right hypochondrium, or any evidence of intestinal irritation, nothing further is required or proper than abstinence, and the use of aperients, and of diluent and acidulated drinks, which may be rendered laxative by the addition of half an ounce of the supertartrate of potash or the sulphate of magnesia. When any degree of fever exists, and pressure over the seat of the liver and duodenum excites pain, much benefit will be derived from the application of a dozen leeches to the region of the abdomen, or anus, in addition to which, warm baths should be prescribed, and the hypochondrium covered with a large cataplasm.

When the attack of icterus has come on gradually, has existed a long time, or does not appear to be affected by the treatment which we have recommended, it generally depends on some organic disease of the liver, a chronic hepatitis, obliteration of the ductus communis choledochus by a biliary calculus, scirrhus of the pancreas, &c.; in any of these cases, the treatment must be wholly directed to the primary affection.

The icterus of new-born infants, the duration of which is seldom prolonged beyond a week, is not a serious affection, and generally requires nothing more than warm bathing, friction of the abdomen, cataplasms to the right hypochondrium, and the milk of a female who has been lately delivered.

We must take care that the liver is not compressed, and when the meconium is not properly evacuated, some laxative should be administered.

HEPATITIS.

In the beginning of acute hepatitis, it is necessary to bleed freely from the arm, and to repeat the operation, as often as the severity of the attack, and the strength and age of the patient may render it advisable.

Venesection being by far the most efficacious mode of abstracting blood in inflammations of parenchymatous structures, it may readily be supposed to exert a powerful influence over an organ, whose functions are so intimately connected with the venous circulation, as are those of the liver; the local abstraction of blood is only useful in removing local pain, especially that which seems to depend on inflammation of the peritoneum covering the liver; for this purpose, leeches, together with cupping glasses should be applied along the margin of the false ribs on the right side; unless the disease has succeeded to a suppressed menstrual or hæmorrhoidal flux, when the abstraction of blood from the anus may be preferable.

It will be necessary to have recourse to the application of leeches, as long as any pain remains. In the mean time, the cure of the disease may be promoted by placing the patient frequently and for a long time in a warm bath, by applying cataplasms or emollient fomentations over the hypochondrium, by mucilaginous injections, directing the patient to drink large quantities of acidulated, mucilaginous, and slightly diuretic fluids, as the infusions of *althæa*, *triticum repens*, lemonade, and oxymel. Mild ape-

rients, as castor oil, should be prescribed, especially if the bowels are constipated, and the alimentary canal appears free from any inflammation, the aggravation of which might provoke the return of the acute symptoms of hepatitis: the strictest abstinence must be enjoined, while any fever remains.

In certain cases in which stupor, prostration of the vital powers, and a feeble soft pulse, prohibit the abstraction of blood, we have known very great benefit follow the administration of camphor, twelve or fifteen grains of it being taken in a six-ounce mixture.

If, notwithstanding, the inflammation continues, and symptoms of suppuration begin to appear, such as repeated attacks of shivering, and a tumour perceptible through the integuments, we must carefully avoid drawing blood, especially from the arm, for bleeding in such circumstances would only bring on death: the practitioner should do nothing but open the abscess, and give exit to the pus: previously taking care to ascertain that he has not mistaken for an abscess of the liver, a distended gall bladder. He may, however, when the symptoms are no longer acute, and nothing indicates the accumulation of pus in any cavity, promote its absorption by prescribing mercurial frictions over the hypochondrium, or at the groin; a drachm of ointment is to be employed at each operation, which should be repeated until salivation is effected. Calomel alone, or combined with jalap, opium and camphor, will also be indicated, if the gastro-intestinal mucous membrane is unaffected.

When acute inflammation of the liver has terminated in induration, or has insidiously assumed a chronic form, when this viscus has descended below the margin of the false ribs, feels hard, and is sensible to the touch, it becomes necessary, every now and then, to apply leeches to the hypochondrium or anus,

and to abstract a moderate quantity of blood from the arm, when the general condition of the patient will permit, especially if there should exist any organic disease of the heart.

It will also be proper to insert a large issue in the neighbourhood of the liver, put the patient on a course of Cheltenham waters, prescribe bitters, laxatives and diuretics, along with the daily employment of feet baths containing muriatic acid, vapour baths, and fumigation of the inferior extremities, a measure recommended by several Italian physicians, and, to re-establish suppressed discharges, hæmorrhoids, ringworm, sweatings of the feet, &c. or, if that is impossible, to supply their place by an issue, recommend moderate exercise on horseback; and, lastly, to restrict the patient to a severe regimen, and remove every thing calculated to act as a stimulant.

Before concluding this chapter, it is proper to remark, that in cases of induration of the liver, where no inflammation exists in the intestinal canal, very great benefit is derived from drastic purgatives administered judiciously, and with caution.

We have seen cases of long established hepatitis, in which almost every remedy recommended in similar circumstances, had been tried ineffectually, and which were accompanied by great enlargement and induration, vanish as if by enchantment, after this plan of treatment had been employed for a few days.

SCIRRHUS, CANCER, TUBERCLES OF THE LIVER.

In consequence of the obscurity in which the pathology of these morbid alterations of structure

is involved, very little can be said respecting the treatment best adapted to their cure. In general, the physician can do nothing more than moderate the irritability of the liver, and prevent inflammation of the stomach or bowels, which is very apt to supervene in the course of organic hepatic disease, by the warm bath and mucilaginous drinks, and, if the symptoms are severe, by the application of leeches to the hypochondrium or epigastrium; however, the abstraction of blood is rarely beneficial, and is almost always in the end more injurious than useful in organic affections of this kind, on account of the frequent occasion there is for its repetition, after it has been once resorted to. Warm bathing, cataplasms and narcotics, given by the rectum if they offend the stomach, may be made use of to alleviate pain; an issue may be inserted in the right hypochondrium and pediluvia, containing muriatic acid, employed daily. In regard to diet, the patient should select such articles of food as he can digest most easily, and in every respect he must be placed in circumstances the most favourable to health.

ENCYSTED DROPSY, HYDATIDS OF THE LIVER.

The cure of these diseases can be expected only from a surgical operation; but we must have most unequivocal evidence that the contents of the tumour are fluid, by decided fluctuation, and by an exploratory puncture made with a very fine trocar, before having recourse to it. As soon, however, as we are satisfied on this point, and the condition of the patient is such as to justify us in exposing him to the risk of an operation, it should be attempted. In the first place, a piece of caustic potash is to be applied

over the most prominent point of the tumour; the texture of the cutis being thus destroyed, an incision should be made through it, at the bottom of which, a second piece of the potassa fusa is to be inserted, so as to destroy the muscular structure in the same way, and lay bare the parieties of the cyst. The superiority of this process to that of simple incision, consists in its permitting the formation of adhesions between the parieties of the cyst and the peritoneum, by which the escape of the fluid into the serous cavity of the abdomen is prevented. As soon as the contents of the cyst are evacuated, it must be injected with some liquid, at first emollient; but afterwards consisting of a weak solution of the chloruret of soda, combined with decoction of cinchona, to prevent the corruption of the pus, and access of air into the cavity. The injection of this liquid must be continued in this manner, until the cavity of the cyst has become obliterated. The history of a case in which a cure was effected by this process, has been recently published by the author.*

* *Revue Médicale*, tome iii. page 111. année 1825.

DISEASES OF THE SPLEEN.

SPLENITIS.

ALTHOUGH the pathology of the spleen is almost as unknown as its physiology, the occurrence of splenitis is sufficiently frequent to teach us that every acute pain developed in this organ, especially when combined with fever, requires antiphlogistic remedies—the general and local abstraction of blood, baths, diluents, and a low diet. As splenitis often occurs along with intermittent fevers, it is proper, in this latter disease, to examine the left hypochondrium, and, in addition to ordinary remedies of ague, to employ those which we have just enumerated, should this region be the seat of any tenderness or tumefaction which is fairly attributable to the spleen; by this means subsequent chronic congestions of this organ will be obviated. The peculiar yellowness of the skin, which usually accompanies these affections may assist in forming a diagnosis.—
(See *Intermittent Fever*.)

DISEASES OF THE URINARY ORGANS.

NEPHRITIS.

WHETHER nephritis is occasioned by the presence of sand or calculi in the kidney, or whether it depends on some other cause, it is equally necessary to attack it at once by venesection, if the patient is strong and the fever considerable. The repetition of this operation a second, and even a third time, will be called for, if the inflammation is severe; or, at least, the frequent application of leeches in large numbers to the lumbar region of the affected side; also cupping glasses to the same place, or to the perinæum, where they appear to be peculiarly useful: it will also be proper to have recourse to immersion of the lower half of the body in a warm bath for two or three hours, emollient cataplasms sprinkled with the tincture of opium, warm demulcent drinks, as the infusion of althæa, linseed tea, decoction of tussilago, &c. taken in small quantities at a time.

After having, in this manner, lessened the violence of inflammation, our next object should be to remove any pain which may remain, by anodyne embrocations, as the spirit of camphor and laudanum employed over the loins, by injections containing eight or ten minims of laudanum, and ten or twelve grains of camphor, along with the internal exhibition of opium, sirup of poppies, lactucarium, carefully watching the action of these medicines, so as to discontinue them if any bad effect seems to ensue.

When an attack of nephritis has supervened on

the suppression of hæmorrhoids, or the catamenia, it is obvious that the first and most important indication is to re-establish these discharges, or supply their place by the application of leeches to the anus, or vagina, by hot fomentations, hip baths, pediluvia, &c.

In chronic nephritis an antiphlogistic course is less imperative; it is, however, advisable to have occasional recourse to the local abstraction of blood from the vicinity of the affected kidney by means of leeches, to use the warm bath regularly, to drink demulcent liquids, and insert an issue or seton in the lumbar region.

Nephritic pains of a certain character, whether habitual or only occasional, are frequently relieved by the employment of assafœtida, a combination of ether and laudanum, half an ounce of the one and a scruple of the other to be taken in the course of the twenty-four hours, by tepid baths, and the various antispasmodics; but in regard to those which are occasioned by the presence of sand, or calculi, and depend on the volume or position of these concretions, the only way in which relief can be expected, is by promoting their expulsion; for this purpose, we must recommend warm bathing, copious drinking, especially of fluids containing bicarbonate of soda and potash, in doses extending from one scruple to one or two drachms in the course of the day, lime or magnesia water, acidulated drinks of muriatic or nitric acid, infusion of triticum repens, uvæ ursi, saxifrage, asparagus and whey, adding a few grains of nitrate of potash to each pint. Some of these diluents, independent of their usefulness in facilitating the expulsion of calculi, are also calculated to prevent their formation, as they are well known to consist principally of lithic acid. Of this kind are the solutions of the carbonates

of potash, lime, and magnesia, and especially of the bicarbonate of soda; this last medicine, however, on account of its sparing solubility, is taken most conveniently in the form of lozenges.

Certain physicians have recommended abstinence from all food containing nitrogen; and it cannot be doubted that, occasionally at least, great benefit has been derived from the employment of farinaceous vegetables, rice, potatoes, beans, sugar, rye bread, mild beer, &c.

Such a diet then it will be proper to adopt, together, with the use of the drinks above enumerated, selecting those which are least offensive to the stomach.

In the circle of his own observation, the author has several times seen decided advantage ensue from the administration of one, two, or three spoonfuls of olive oil, combined with an equal quantity of sirup of lemon, at an early period of nephritic complaints. In several instances the pain has been entirely removed by it.

Persons liable to the formation of gravel, should avoid a damp atmosphere, live in well aired apartments, wear flannel over the whole surface of the body, and, if there is reason to think that their place of residence is favourable to the developement of the calculous disorder, to which they have a natural tendency, they ought to remove into some more congenial climate.

The abscesses, which sometimes form in the vicinity of the kidneys, require to be opened early.

DIABETES.

Of the numerous methods of treatment which have been suggested for the cure of this disease, the

employment of tonics and animal food appears to have proved most successful, and is now the most universally adopted. While, therefore, on the one hand, we prescribe astringent and tonic draughts, such as the infusion of cinchona, calumba, rhatany, quassia, gradually diminishing the quantity every day, and alum, kino, catechu, myrrh, turpentine, and balsam of tolu, all of which are said to have been useful; it is necessary on the other hand to recommend highly nutritious animal food, such as concentrated rich soups and jellies, with wine.

At the same time we should endeavour to promote diaphoresis by suitable medicines, especially the compound powder of ipecacuanha, vapour baths, and frictions. In Milan, the author saw diabetics successfully treated by exciting a general eruption over the skin, such, for instance, as the itch.

In patients who are of a plethoric habit, or who complain of pain in the region of the loins, it will be proper in the first place to have recourse to the general or local abstraction of blood.

[I subjoin an analysis of the treatment recommended by Dr. Prout in his work on this subject.

In acute and recent cases, the propriety and even necessity of general bleeding, repeated as often as circumstances may require, is indisputable. In protracted cases, however, occurring in old subjects, and wherever there is great debility, this remedy should be very cautiously employed. The local abstraction of blood has also been found beneficial, particularly when unusual fulness, heat, or tenderness about the stomach, has been complained of. The bowels should be kept freely open by some gentle aperient; but mercury, saline, and other medicines likely to act as diuretics, are generally to be avoided. In regard to opium, it is very useful in counteracting the nervous irritability so common in diabetes; it has also, beyond doubt, in several

instances greatly diminished the quantity of urine, but it does not appear capable of effecting more than a temporary alleviation of the symptoms. The best preparation of opium is the *pulvis ipecacuanhæ compositus*, on account of its diaphoretic property. In conjunction with the above remedies, and with the view of restoring the cutaneous functions, the warm or vapour bath, the flesh brush, &c. should be employed; the patient should also wear flannel next the skin, and take as much exercise as he is capable of without fatigue. He ought to drink very little, avoiding in general cold liquids, which, being taken with greater avidity, it is difficult to take in due moderation. The solid food of the diabetic patient should consist essentially of animal and farinaceous substances, and as little as possible of sweet and acescent vegetables, for no other reason, however, than that the former are more easily digested than the latter. The quantity of food is as important as its quality, and must be confined within very moderate limits. Lastly, unless the mind is tranquil, little benefit can be expected from any treatment whatever.]

CYSTITIS.

This inflammation, if existing in any considerable degree, and attended with fever, must be promptly met by the abstraction of blood from the arm, and the application of leeches, more or less frequently, to the hypogastrium, perinæum, and anus. The effect of these measures is to be promoted by the employment of warm baths, in which the patient remains a long time, emollient cataplasms, injections, low diet, drinking copiously of diluent or slightly mucilaginous liquids, such as the infusion of althæa.

the *triticum repens*, common parsley, coltsfoot, whey, &c. taken hot and in a small quantity at once, until perspiration is established. If the inflammation is attended with retention of urine, this treatment would be altogether applicable to it, but not always sufficient, without having recourse to the introduction of the catheter; in regard to this instrument, it is better to let it remain in the bladder, unless the neck of this organ is involved in the inflammation, or the catheter excites irritation, or the largeness of the canal renders its introduction easy.

When cystitis has been occasioned by the administration of cantharides, it will be necessary, in addition to the measures of which we have spoken, to have recourse to camphor, taken by the stomach, thrown up the rectum, and employed as a liniment.

Whenever inflammation of the bladder has been preceded by the suppression of some sanguineous discharge, long established cutaneous eruption, ulcer, ringworm, local sweating in the feet or axillæ, or a remarkable diminution of the general cutaneous perspiration, which is most frequently the case, it becomes necessary to re-establish these affections, which have become habitually necessary to the system, or, if that is impossible, to substitute for them the local abstraction of blood, the insertion of an issue in their ancient seat, hot cataplasms, wearing flannel, vapour baths, friction with the hand, either dry or anointed with oil, and frequent laxatives; lastly, when chronic catarrh of the bladder, for such is the character which inflammation generally assumes in these circumstances, is unattended with pain or fever, the employment of turpentine in the form of pills, beginning with doses of twelve and eighteen grains, or its essential oil, given in combination with mucilage, at first to the amount of half a drachm, then gradually increasing it up to two or three drachms in the course of the twenty-four hours, is often a very effectual remedy.

Conjointly with this medicine, the infusion of bark and the powdered leaves of the *uvæ ursi*, alone or along with some mineral water, should be exhibited; an issue, or seton, being at the same time inserted in the perineum, and the tartar-emetic ointment rubbed in at this region, the hypogastrium, or inner side of the thighs.

But if, on the contrary, the bladder appears, from the existence of pain and dysuria, to be in a state of great irritation, we must either employ warm baths or the other remedies before enumerated. Injections *à double courant*, as recently recommended by Jules Cloquet, are well worthy of trial.

But no permanent benefit can be expected in this, any more than in every other disease, unless the patient is willing to submit to, and persevere in the adoption of certain hygienic precautions; namely, abstinence from every description of stimulating food, perfect continence, which is the most important of all, the habitual employment of flannel over the whole surface, keeping the feet carefully dry and warm, daily friction, occasional bathing, residing in a dry situation, with a southern aspect and in a warm climate, and, lastly, avoiding violent exercise of every kind, such as riding on horseback, forced marches, long walks, &c. The severity of our injunctions, in regard to diet, may only be relaxed in favour of persons greatly advanced in age; to these the moderate use of wine may be permitted.

The vesical catarrh which depends on stricture of the urethra, or the presence of a calculus in the bladder, comes more properly under the care of the surgeon, as its cure can only be effected by means of an operation.

HÆMATURIA.

Whenever hæmaturia occurs in persons of a plethoric habit, or appears to have been occasioned by the omission of an habitual bleeding, the scanty flow of the catamenia, or of hæmorrhoids, it is proper to abstract blood from the arm, place the patient in a bath, and prescribe the free use of diluent liquids, such as the infusion of mucilaginous substances and whey. It is a useful precaution to leave a catheter constantly in the bladder, in order that the blood may not accumulate.

If this hemorrhage is attended with local pain in the lumbar, or hypogastic region, it is necessary to apply leeches to the part affected; and, in cases of this description, we must never omit, as soon as the patient becomes convalescent, to warn him against every kind of excess in any of his habits of life, to enjoin strict temperance, and even, if there seems occasion, to forbid altogether the use of wine or rich stimulating food.

When the discharge of blood is very profuse, and the strength of the patient is rapidly failing, we must endeavour, by refrigerating applications to the abdomen, perinæum, and thighs; and by injections into the vagina of freezing water, to check its progress; the patient should be placed in a very cold hip bath, and the extract of rhatany internally administered. As in these cases hæmaturia is sometimes the consequence of the rupture of a varicose vein, it is proper to leave a catheter permanently in the bladder.

Whenever this affection occurs in persons who have long been in a bad state of health, of a debilitated constitution, or scorbutic habit, a tonic

system of treatment is indicated. Preparations of iron, cinchona, vegetable acids, and cold bitter drink, are, in these cases, our most valuable remedies. An antiphlogistic treatment would only hasten death. (See also *Scorbutus* and *Menorrhagia*.)

DISEASES OF THE ORGANS OF GENERATION.

AMENORRHEA.

WHEN the suppression of the catamenia has occurred suddenly, and has been occasioned by exposure to cold or some depressing mental emotions, a fit of anger, or any other similar cause, the first object of the practitioner is to bring about a determination of blood to the uterus, by dry friction over the thighs, hot fomentations over the hypogastrium, irritating pediluvia, fumigations directed towards the uterus, a warm bath, or some aromatic and hot drink. But if these means are ineffectual, it will be necessary to have recourse to the application of leeches to the vagina.

When amenorrhea has existed during several months, and does not depend on pregnancy, or any other affection, its treatment must be regulated by the condition of the individual.

In a plethoric patient, of a sanguine temperament, predisposed to congestion about the heart, general bleeding, diluent drinks, bathing, diminishing the quantity of food, abstinence from wine and other stimulants, are the means best calculated to restore the function of the uterus.

In amenorrhea, depending on excessive irritability, in a thin nervous female, with whom the catamenia are habitually scanty, the remedies of most efficacy are cold bathing, cold affusions, if the state of the pulmonary organs does not prohibit it, and corporeal exercises, in which the mind has little share,

such as gardening and walking, and antispasmodic drugs. It is important to watch over the digestive functions, improve the appetite, allow the patient plenty of nutritious food, and invite sleep by moderate daily exercise; at the proper period for the appearance of the menstrual discharge, it should be encouraged by fumigations of assafoetida, directed towards the uterus, by means of an inverted funnel.

If the female in whom the menses are obstructed, is of a lymphatic temperament, phlegmatic, much weakened by previous illness, and residing in a damp, ill ventilated situation, the habitual use of wine and nourishing food, covering the body with flannel, daily exercise, dancing, and marriage, should be recommended. It is necessary to ascertain whether leucorrhœa exists, as this affection is very common in such patients; the preparations of iron, as the subcarbonate, iron filings, and chalybeate waters, cinchona and bitters, may then be employed with benefit. Lastly, determination of blood towards the uterus should be promoted, especially at each recurrence of the proper period of the menstrual discharge, by the oil of turpentine in drachm doses daily, the application of dry cupping glasses to the loins and hypogastrium, by galvanism, aromatic fumigations, and hot hip baths. The local abstraction of blood, which is very seldom beneficial in cases of this character, is altogether contra-indicated when a chlorotic condition attends amenorrhœa.

When this affection is the consequence of libidinous excesses, the strictest continence must be observed. If the catamenia have been long obstructed, and nature has substituted some other evacuation, our object should be rather to maintain this new function, than to recall the old one. Lastly, if the influence exerted by the uterus over the system, is greatly disproportioned to the age of the

patient, marriage and consequent pregnancy are the only means of restoring an equilibrium.

The regular performance of this important function, or, in other words, the prevention of amenorrhœa, greatly depends on the removal of the predisposing or immediate causes, which vary almost infinitely, according to the temperament of the individual.

METRITIS.

The treatment of this inflammation is considerably modified by the condition of the uterus at the time of its commencement.

When occurring in a young female at the period of the first menstrual effort, in which circumstances it is often mistaken for amenorrhœa, our object will be to assist this function by directing fumigations towards the uterus, by the employment of hip baths, pediluvia impregnated with mustard, dry cupping glasses affixed over the hypogastrium, loins, or inner side of the thighs, and the local abstraction of blood from this latter place, or from the groin, by means of leeches.

In inflammation of the womb, occurring in an adult female not in the puerperal state, after having made one moderate bleeding from the arm, it will be proper, unless high fever attends, to have recourse to the application of leeches to the hypogastrium, perinæum, and even the neck of the uterus, especially when metritis is the consequence of venereal excesses, to direct the employment of warm baths, in which the patient should remain a long time, emollient cataplasms, tepid injections of some mucilaginous substance, and to restrict the diet to whey, lemonade, or demulcents.

In metritis coming on after delivery, the condition of the uterus is in several respects peculiar: it is greatly increased in size, its substance is more spongy, more susceptible of extensive suppurative inflammation, and the adjoining parts, as the ovaries, peritoneum, &c. are more disposed to take on inflammation: these circumstances, together with the general excitement into which the system is thrown by the efforts of delivery, and the great change which then occurs, all combine to render a much more active treatment necessary.

General blood-letting is here indispensable; and it must be repeated a second or even a third time, unless the patient is of a highly nervous temperament, of weak constitution, rather advanced in life, or has lost so much blood from hemorrhage, as to render further evacuations decidedly dangerous; the practitioner, in forming an opinion on this point, must not be guided by mere paleness of face, for that may be seen in most females recently after delivery, but solely by the pulse and general condition of the patient.

Whenever there is pain, it must be attacked by the application of leeches, in as large a number as its severity requires, and the strength of the patient permits. Blisters also may be applied to the inner side of the thighs, after the abstraction of blood has obviated all fear of danger from excessive febrile reaction; at the same time, the employment of warm baths, the patient continuing in them for a long time, of cataplasms, fomentations, enemata, and injections into the vagina, will assist in moderating the inflammation, and prevent its extension to the peritoneum. Should the skin be dry or less moist than during health, perspiration may be promoted by aromatic fumigations, directed even into the patient's bed, by means of a tin tube.

If the female is prevented from suckling, or metritis has supervened on an abortion, a purgative plan of treatment may be adopted, especially if the attack of inflammation is accompanied with bilious symptoms, or the tongue is covered with a thick fur, or evacuations of the primæ viæ have, in other similar cases occurring about the same time, appeared beneficial: when the mucous membrane of the alimentary canal is wholly free from inflammation, while the metritis is extremely severe and seems likely, ere long, to prove fatal, it has been recommended to employ, together with the ordinary antiphlogistic agents, the tartarized antimony, in large doses, on the principle of counter-stimulation.

As auxiliary measures, it will be proper, to enjoin perfect abstinence from food, silence, the removal of every thing calculated to excite uneasy sensations, or powerful mental emotions.

Metritis occasionally depends upon, or is aggravated by, the presence of a portion of the placenta in the uterus: this we must then endeavour to detach, by fumigations, and emollient injections into the uterus. The same measures are necessary when this inflammation has terminated in suppuration, and the pus flows through the vagina; but if, on the contrary, gangrene has supervened, a solution of the chloruret of soda should be injected into the vagina, while we endeavour to maintain the patient's strength by tonics.

Chronic metritis, affecting principally the neck of the uterus, requires the insertion of issues in the loins, an occasional bleeding from the arm, if occurring in a young and robust female, the local abstraction of blood by leeches, applied by means of the *speculum*, to the very neck of the uterus itself; douching, unless it occasions pain, injections of mucilaginous and demulcent liquids, hip baths employed very frequently during one or two

hours each time, emollient cataplasms, applied to the further extremity of the vagina, a mild regimen, and total abstinence from sexual intercourse, must be enjoined, as indispensable to the cure or even mitigation of this affection: and, even then, long perseverance on the part both of physician and patient will be necessary. See *Scirrhus of the Uterus*.

SCIRRHUS, CANCER OF THE UTERUS.

The plan of treatment described under *chronic metritis*, is alike indicated in confirmed scirrhus of the os uteri. We may, however, observe in addition, that as this organic disease exists generally only at one certain period of life, that, namely, in which the catamenia begin to disappear, or at least is at that period more active in its progress, it is important, in order to prevent, scarcely less than in order to destroy scirrhus, to establish in good time some emunctory, which may, to some extent, supply the place of the discharge which has ceased. For this purpose, a large issue may be inserted in the inner side of the thigh, and any unnatural determination of blood towards the uterus, removed by the application of leeches, or even by taking a moderate quantity of blood from the arm, when the patient is plethoric. The practitioner should always ascertain the general state of his patient's health; whether, for instance, she is subject to head-ache, colic pains, rheumatism, hemorrhage, piles, or cutaneous eruptions; and whether there is in her family an hereditary tendency to scirrhus affections; in either case, still greater precaution is necessary, and every thing calculated to promote the development or progress of organic disease of this organ must

be attended to. In a patient thus predisposed, the occurrence of inflammation in the womb, requires the employment of the most active measures, and it will not be prudent to cease watching over her so long as any appearance of irritation remains, or there is any reason to apprehend a relapse.

In regard to the more specific remedies of scirrhus, besides establishing artificial discharges, we would recommend friction along the inner side of the thighs, with the hydriodate of potash, to the amount of half a drachm, or a drachm daily, as well as its application to the neck of the uterus. The internal employment of iodine, as in the form of tincture, is also proper, beginning with a few minims, morning and evening, in a glass of some mucilaginous liquid, or that of the extract of conium in gradually augmented doses, combined with the decoction of sarsaparilla. Together with these medicines, a most severe regimen must be adopted, the patient's allowance of food never being extended beyond two ounces of bread, and the same quantity of roasted meat, twice during the day.

This plan of treatment, which is very generally adopted in Germany, and partially in Paris, is successful in a sufficient number of cases, to render it worthy of our most serious attention. It is considered practicable to substitute the preparations of iodine for the conium, and to maintain the *cure famis*. But if the alimentary canal is the seat of irritation, to however small an extent, it is evident that the employment of these various substances must be deferred until the derangement of the digestive organs has altogether ceased, and that, if it should return, they must be discontinued. In reference to this subject, we may here make the general observation, that not only in scirrhus and cancer of the uterus, but in every structural disease of an organ, whose functions are not abso-

lutely essential to life, the fatal termination is delayed for a longer or shorter time, according to the degree in which the healthy condition of the strictly *vital* functions, especially that of digestion, is maintained. Hence, the great necessity of caution not to endanger the alimentary canal, by persisting in the employment of measures, which, instead of alleviating one disease, keep up two. In cases, therefore, in which the digestive organs are at all disordered, it appears to be much more prudent to administer most medicinal substances through the large intestines, which are much less susceptible of irritation than the stomach and superior portion of the alimentary canal, or through the skin, deprived of its epidermis, or rendered more permeable by means of the warm bath. Thus, mercurials, if there is any reason to suspect a syphilitic affection, narcotics, to which it is necessary to have recourse, in order to alleviate the severe suffering which usually attends this disease; in a word, whatever remedies the nature of the disease, the individual condition of the patient, and the combination of symptoms, may render necessary, ought to be administered by the skin, rectum, or vagina. This principle is especially applicable to the employment of the active medicines recommended by some physicians; as, for instance, the oxide of gold, lately recommended by Dr. Chrestien, or Montpellier; which may be rubbed in at the gums. After having had, conjointly with Professor Recamier, the care of numerous cases of organic disease of the uterus, the author would state, as the result of his experience, that the permanent application of pledgets of lint imbued with some narcotic liquid, and retained in their place by means of a wire, so as also to be able to draw them out with facility, is the most effectual, and at the same time, the safest means of lessening the pain of the uterus.

The most common anodynes are, the acetate of morphia, extract of opium, laudanum, lactucarium, belladonna, hyosciamus, monkshood, aconite, prussic acid, which may be administered in clysters, blisters, or by the stomach, if the condition of that organ will permit; it should be remembered, that a medicine which appears not to act when dissolved in, or combined with a second, may, if given in a different manner, prove of the greatest benefit.

But when the excruciating pain, occurring for a few moments every now and then, in some females afflicted with this disease, is not in any degree relieved by narcotics, either on account of their being rejected by the stomach, or because their action is in any other way counteracted, we may partially, though very imperfectly, supply their place by hot cataplasms over the whole surface of the abdomen and thighs, if the pain extends along the extremities, by embrocations of hot oil in the same parts, dry cupping at the groin, and general fumigation, which, in these cases, must be performed while the patient lies in bed, by means of a tin tube, a plan which we have often found to succeed very well. Compression of the os uteri, by means of a pessary, or plug of lint, while the uterus is confined, on the other hand, by a bandage around the lower part of the abdomen, has occasionally been useful in the experience of Professor Recamier.

For the manner of applying escharotics to the neck of the uterus, removing this organ, or performing any of the operations which organic disease in the uterus may require, we refer the student to writers on operative surgery; we may, however, remark, that after the operation, the plan of treatment above described must still be persevered in; otherwise, there will be great dan-

ger of relapse. Should the patient be unwilling to run the risk, or endure the pain of an operation, much benefit may be derived, when the cancer is soft and broken down, from cauterization of the affected parts by the nitric oxide of mercury: by this means, it is possible to check, if not prevent absorption, which otherwise will generally ensue, and give rise to the cancerous diathesis, and hectic fever. After each application of this escharotic, the vagina should be well washed out by injections, and the patient then placed in a hip bath.

The fetid odour which accompanies cancerous ulceration, or softening of the neck of the uterus, is most effectually destroyed by means of the chloruret of soda, and the cauterization which we have just recommended.

The diet of a patient labouring under organic uterine disease, should consist of such articles of food as are easily digested, and not of a stimulating nature, and they must be taken in very moderate quantities; with these restrictions, the inclination of the patient may be safely indulged.

MENORRHAGIA.

When menorrhagia is unconnected with any organic disease of the uterus, as polypus, or cancer; is recent, and occurs in a plethoric habit of body, it requires the abstraction of blood from the arm, and large quantities of acidulated and slightly astringent drinks, taken cold. If these remedies are insufficient, and the pulse and general condition of the patient furnish no contra-indication, a second bleeding is necessary; also the application of cupping glasses to the thorax, wet

bandges to the hypogastrium, and, when the alimentary canal is unaffected, the internal exhibition of nitre, in some mucilaginous liquid: lastly, recourse should be had to cold injections, or, when practicable, to the introduction of ice into the orifice of the vagina, and closure of the orifice of the uterus by means of the speculum.]

When menorrhagia is attended with pain in the uterus, emollient cataplasms sprinkled over with laudanum, will often greatly alleviate it.

Chronic or passive menorrhagia requires the exhibition of the various preparations of iron, cinchona, rhatany, acidulated drinks, and more than all, a proper regimen; this last point is especially necessary, when the disease originates in a disordered condition of the digestive organs, which is kept up by the repeated loss of blood, day after day: we must take care, however, that our anxiety to prevent debility does not lead us to overlook the cause of the complaint in a latent chronic gastro-enteritis.

LEUCORRHOEA.

When leucorrhœa is accompanied with itching, a sensation of heat in the vagina, pain in the loins and groin, a sense of weight about the uterus, in a word, with the symptoms of irritation, the most suitable remedies are, warm baths, hip baths, emollient injections, douching, and diluent drinks; if the symptoms continue, we must resort to the application of leeches to the labia, or to the mucous surface of the vagina, by means of a speculum perforated with a certain number of openings. But when the disease is on its decline, the pain and itching in the vagina having ceased, and the stomach and bowels being

unaffected, it will be proper, to prevent subsequent atony, and the long protracted discharge of which the mucous membrane of the vagina is apt to become the seat, by chalybeate waters, oil of turpentine, extract of rhatany, fumigations of amber, &c.

Astringent fluids, as the infusion of roses, or pomegranate bark, a weak solution of alum, or sulphate of zinc, with a certain quantity of laudanum, should also be injected into the vagina, and retained there as long as possible.

The internal exhibition of the tincture of iodine, in doses, at first, of two or three minims, and friction with the ointment of the hydriodate of potash, are indicated, in cases of leucorrhœa which consist in atony of the mucous membrane of the vagina; in these cases, also, the balsam of copaiba, administered at the commencement even of the complaint, and in doses varying from half an ounce to one or two ounces, has proved very useful.

When leucorrhœa is constitutional, and has existed from childhood, more benefit will be derived from a judicious regimen than from medicines: the principal indication is to form such rules for the regulation of the patient's diet, clothing, place of residence, and exercise, as are calculated to give the sanguiferous and muscular systems a predominance over the lymphatic system: thus, roasted butchers' meat, vegetable bitters, wine, woollen clothes, flannel next to the skin, a spacious apartment, well ventilated, and with a southern or eastern aspect, a dry temperate climate, cleanliness, habitual dry rubbing, corporal exercise in proportion to the strength of the patient, and diversion of the mind, are the principal measures to be resorted to for the purpose of removing a leucorrhœal discharge, and establishing the general health in such individuals. The injurious practice of using feet stoves must be prohibited, and any other bad habit which may be discovered:

lastly, an issue or seton, kept open for a considerable time, even after the cessation of the discharge, is a very salutary substitute for it, and preservative against any metastasis of the disease. In some cases, leucorrhœa spontaneously disappears at the period of puberty, or marriage.

Yet in plethoric females, general bleeding is often very advantageous, and it is by an antiphlogistic plan of treatment, that the leucorrhœa which arises about the period of the menstrual discharge is to be removed.

If this affection depends on amenorrhœa, a chronic gastro-enteritis, imperforation of the os uteri, the repression of some cutaneous eruption, ulcer, or hæmorrhoids, it will be necessary to re-establish these emunctories, and fulfil the various indications which may present themselves, before we endeavour to check the vaginal discharge.

Uneasiness at the stomach, a sallow hue of the countenance, and the distressing lassitude so frequently complained of by females affected with leucorrhœa, require tonic medicines, as the preparations of iron, cinchona, and bitters, unless the stomach is evidently disordered by them. See also *Metritis, Scirrhus of the Uterus, Menorrhagia*.

GONORRHOEA.

Acute inflammation of the mucous membrane of the urethra may be easily dissipated; general bleeding is unnecessary, unless the attack is unusually severe, is attended with great febrile reaction, occurs in a patient of a plethoric habit, constitutionally disposed to inflammation, or has extended, or threatens to extend, to the neighbouring organs, as the prostate, bladder, seminiferous vessels, epididy-

mis; in all other cases, every indication will be sufficiently fulfilled, by the application of leeches along the canal, and at the perinæum, by local bleeding, and the frequent and long continued use of hip baths, unless, as happens in some few cases, these baths seem rather prejudicial: emollient cataplasms are to be applied over the affected parts, and the patient should drink copiously of diluent and mucilaginous fluids, in order that the urine may produce less irritation as it flows over the canal: linseed tea, gum water, the infusion of althæa, and a weak solution of alum, will answer this purpose; absolute rest must be enjoined, otherwise the cure of this inflammation will become much more difficult and tedious. If the patient is tormented, especially during the night, with acute attacks of pain, or frequent erections, some sirup or decoction of poppies may be added with much advantage to his ordinary beverage; a few grains of camphor, lactucarium, &c. may be employed for the same purpose; also, injections, containing six or eight drops of laudanum. Much benefit may be derived from bathing the penis during the night, in a decoction of mallows, by means of a bladder; these precautions will generally prevent nocturnal pollution, by which inflammation is often kept up.

In a very slight attack of gonorrhœa, the symptoms of which are merely local, nothing more is necessary than the use of mild diuretics, bathing, and the abstraction of the various stimulants to which the patient is accustomed during health, as coffee, wine, highly seasoned dishes, &c. Nevertheless, when the acute stage of this affection, that is, the stage attended with pain, has terminated, very great benefit is often derived in cases both of this and the preceding character, from the employment of stimulants, as the balams, the leaves of the *uvæ ursi*, the oil c.

turpentine to the amount of a drachm, or two drachms daily, balsam of copaiba administered by the mouth, or in an injection, alone or combined with cubebs, rhatany, the infusion or tincture of calumba, or jumper berries, substances of which we shall speak more fully afterwards.

As a remedy particularly useful towards the termination of a long protracted gonorrhœa, we may mention the employment of moderate and permanent compression of the penis, always, however, taking care to intermit it during the night ; otherwise, erection taking place during a profound sleep, might occasion very injurious consequences ; moderate sexual indulgence, and absolute rest in bed, are similarly useful ; indeed, we have seen cases of gonorrhœa yield with astonishing rapidity to these measures, after having resisted all the ordinary remedies.

It has been proposed, to prevent the development of gonorrhœa, by violently interrupting the morbid action, as soon as the earliest symptoms of it appear. For this purpose, the internal exhibition of the balsam of copaiba is generally employed ; of which the quantity that may be given, varies from half a drachm to two ounces during the day, according to the energy of its operation, which is almost infinitely variable ; a drachm being, in some cases, sufficient to produce hypercatharsis, while in others, scarcely any sensible effects follow the administration of an ounce. In order that any benefit may be derived from the balsam of copaiba in gonorrhœa, it must not excite more than a gentle action of the bowels ; otherwise, it will not only occasion a gastro-enteritis, but will be evacuated with the alvine digestions, and thus not become absorbed, or affect the system. The best means of destroying its nauseous taste, is to combine it with magnesia :

it may be thrown up the rectum in a solution of gum arabic, but its operation is less certain when given in this way, than when it is taken by the stomach. When copaiba excites nausea, vomiting, colic pains, or excessive purging, the employment of it must be discontinued, the alimentary canal left to recover itself, warm bathing with emollient soothing injections substituted, in short, a totally opposite plan of treatment adopted. The rectified oil of turpentine, in doses of a drachm daily, alone, or in combination with honey, or mucilage, may be used in the place of the balsam of copaiba: concrète turpentine is of no use, except towards the termination of gonorrhœa, its action not being powerful enough to check the inflammation at an early period.

Cubebs, which, however, is even more variable in its action than copaiba, is another powerful remedy: the quantity of this substance, which it will be advisable to begin with, should not greatly exceed a scruple to a drachm of the powder every six hours: though an ounce and a half is given in the course of the day by some practitioners: the extract, or powder of rhatany, is also employed for the same purpose, either alone or combined with cubebs.

In the commencement of gonorrhœa, Croton oil proves, occasionally, an admirable remedy: the best mode of administering this powerful medicine, is, to give it in the form of pills, each of which should contain one minim of the oil, combined with a few grains of gum and soap.*

Of all these remedies it may be said, that very frequently, as soon as we discontinue the employ-

* See an article by Dr. Tavernier, inserted in the *Bulletins de l'Athénée* for October, 1825, the most complete essay we have on the action of Croton oil.

ment of them, the gonorrhœa returns; and that when, after an interval of some days, we again have recourse to them, they not only do not suppress, but on the contrary, rather increase the returning inflammation. It is, therefore, the safest plan, to persevere in our treatment until the cure is complete, unless some unfavourable symptom appears, fairly attributable to the medicines which our patient is making use of: it is also advisable, after having once discontinued remedies of this kind, not to have recourse to them a second time, until we have well assured ourselves, by a minute and comprehensive examination, that there is nothing to contra-indicate their employment.

With respect to injections into the urethra with wine, infusion of roses, solutions of the sulphate of zinc, acetate of lead, sulphate of copper or iron, tincture or wine of opium, &c. there are too many instances of the injurious effects of this mode of treatment, even if employed only towards the termination of gonorrhœa, to make it worthy of much attention. In some cases, perhaps, they may prove useful; but sinapisms, or blisters to the thighs, may always, in our opinion, be advantageously substituted for them.

This, perhaps, is a proper place to make a few general observations on antisyphilitic remedies. There is no occasion to have recourse to them in cases of gonorrhœa, unless it is certain that the contagion was communicated by a person affected with syphilis: the occasional, but very rare occurrence of apparent syphilis, several years after the cure of a gonorrhœa, whether in the same individual, or in their children; and the successful treatment of these affections by mercury, after the failure of all the ordinary remedies, prove nothing beyond the simple fact, that cases of this description may be cured by mercury; certainly, the conclusion

cannot be legitimately drawn, that they were cases of genuine syphilis. Medicine is not a science of sufficient certainty to authorize us in regarding as a fact, what is nothing more than a probable inference. In other diseases, how frequently does it happen, that one medicine succeeds after twenty others have failed! How many practitioners are indebted to such a happy accident for their reputation! To establish that a disease, cured by mercury, is of a syphilitic nature, the same evidence is necessary as in establishing the nature of any other poison, as of hydrophobia, or variola; namely, the suspected person must have communicated his disease to another, and this second individual, in his turn, be capable of reproducing it. But such evidence as this has never, I believe, been adduced in favour of the opinion of those who contend that an antisiphilitic treatment is necessary in every case of gonorrhœa. Its partial adoption, as proposed by some authors, is perfectly useless, and for that reason prejudicial: for the patient either has syphilis, in which case these half measures are inefficient, or he has not, and then his system is tainted with the poison of mercury for nothing. It may, therefore, be concluded, that an antisiphilitic plan of treatment should never be resorted to, unless there are other evidences of the existence of syphilis, than the ordinary symptoms of gonorrhœa.

When inflammation of the urethra occurs alternately with rheumatism, or is a consequence of this affection, as in some instances mentioned by Dr. Beaude; when it depends on some cutaneous eruption, or arises spontaneously in a person of scrophulous habit, without previous intercourse, local remedies are generally sufficient. Our principal object should be to remove the primary affection on which this depends.

Gonorrhœa, which is simply occasioned by new

beer, the presence of a calculus in the bladder, a stricture of the urethra, or the pernicious habit of onanism, will cease on the removal of the cause which has provoked it.

Lastly, when gonorrhœa disappears suddenly, and a metastasis occurs in the supervention of orchitis, an attack of ophthalmia, which usually is in this case very severe, or any other disease, it is necessary, without delay, to restore the original discharge from the urethra, by irritating injections, or by keeping a bougie in the canal. But this metastasis may generally be prevented by wearing a suspensory bandage: a precaution which should be adopted in every case of gonorrhœa, and persevered in until the complete removal of the complaint. See also *Leucorrhœa*.

ORCHITIS.

As soon as the patient complains of a dull pain in the epididymis, or along the course of the spermatic cord, it is necessary to order the frequent prolonged use of the warm bath, emollient and narcotic cataplasms, and, above all, absolute rest in bed; this last means alone, often being sufficient to arrest the inflammation. But when the pain has become very severe, while the tumefaction is already considerable, and increases, the local abstraction of blood by means of leeches, is indispensable.

When we employ a small number of leeches, such as eight or ten, more irritation is produced by their punctures, than lessened by the abstraction of blood they occasion; it is therefore advisable, however slight the inflammation may be, on no occasion to apply fewer than thirty or forty.

The author has been convinced of the propriety

of this recommendation by repeated observation at the Hôtel-Dieu.

Even when general bleeding from the arm has been practised on account of a plethoric habit of body, the number should not be reduced. If the application of leeches is not sufficient to remove all the symptoms of orchitis inflammation, it must be renewed frequently, before the inflammation has advanced too far to terminate in resolution.

The employment of the warm bath is generally indicated, particularly towards night, in order to prevent nocturnal pollution, (see *Gonorrhœa*,) a combination always injurious, especially when the testicle is much swollen: yet bathing often increases the pain, probably in consequence of the motion which getting in and out of the bath requires, together with the pressure of the water, and weight of the depending scrotum. It is therefore advisable not to take off the suspensory bandage, but to wear it constantly; and when, notwithstanding this precaution, the use of the bath increases the pain, it must be discontinued, and we must depend upon leeches, cataplasms, and diluent drinks.

Care must be taken to keep the bowels gently open by means of laxatives, for constipation is sometimes sufficient, even to occasion orchitis, especially on the left side; and if combined with it, will greatly impede its resolution. During both night and day, a soft pillow should be placed between the thighs of the patient, so that he may not bring on a fit of pain by moving his body during sleep.

If inflammation advances with great rapidity, its resolution is equally sudden; a very considerable tumefaction will often disappear in a few days: the epididymis, however, which is principally affected, continues somewhat hardened and

enlarged, resisting poultices, baths, and the balsam of copaiba, which, in this case, may be employed as well as turpentine and cubebs, without danger. (See *Gonorrhœa*.)

Friction and mercurial plasters, or a plaster containing the hydriodate of potash, may be tried, and if these fail, time only will effect the reduction of the tumour: they are unattended with danger, unless the patient is predisposed either hereditarily, or in consequence of his advanced age, to cancerous affections; in this case, it is advisable to insert an issue or seton near the affected organ.

When orchitis supervenes on the cessation or diminution of a gonorrhœal discharge, and especially when the gonorrhœa is about to terminate, the same treatment is required as in other cases.

Lastly, after an attack of orchitis, the testicle remains for a long time peculiarly susceptible of inflammation on the slightest occasion; it is therefore proper to recommend the habitual use of a close suspensory bandage. Antisyphilitic remedies are, in the opinion of the writer, totally uncalled for and inefficacious, either in removing this susceptibility, or the tumefaction subsequent to inflammation. See the remarks on this subject under *Gonorrhœa*.

DISEASES OF THE PERITONEUM.

PERITONITIS.

ON the first indication of peritonitis, blood must be drawn from the arm to a large amount, and the operation repeated soon afterwards, even until the third or fourth time, if the patient is young, of a plethoric habit of body; and if the pain continues with very little abatement, or the blood is rich, with a cupped, buffy surface; immediately after the first abstraction of blood from the arm, thirty or forty leeches are to be applied over the abdomen, and renewed as often as the continuance of the pain may render it necessary. Emollient fomentations or poultices, as may be most agreeable to the patient, should succeed the application of leeches, or if there is room, should be used along with them; lastly, the patient must be placed in a warm bath, remaining in it as long as possible, that is to say, two, four, six or eight hours, if the peritonitis is very severe. Even these measures, however, will be unsuccessful, unless they are employed at the onset of the attack, before albuminous depositions, adhesions, or a copious serous effusion has taken place: in some individuals, the progress of peritonitis towards suppuration (and the case is similar as it regards other serous inflammations) is made with extreme rapidity; so that this affection is in the highest degree dangerous, and often terminates fatally in a very short time.

There is very little difference of opinion in respect to the proper treatment of peritonitis

during its first stage, and the propriety of antiphlogistic measures is acknowledged by all practitioners: there is, however, connected with it, a subject of controversy, the importance of which claims for it our consideration. So long as peritonitis remains acute, it is very unusual for the mucous membrane of the intestines to be at the same time in a state of inflammation; on the contrary, in most cases, it is pale, and without any apparent vascular arborescence, and the peristaltic action of the alimentary canal at the same time, as it were, paralyzed; thus occasioning obstinate constipation. The mucous membrane being thus so little susceptible of influence from inflammation of the peritoneum, some practitioners have suggested the possibility and safety of making this extensive surface the seat of a powerful revulsion; there is every inducement to act on this opinion, the correctness of which experience appears to confirm; for when we consider the rapid progress of peritoneal inflammation, the numerous instances in which it resists the abstraction of blood, and the difficulty which always exists during a state of disease, in exciting by artificial means a secondary inflammation, especially in a different tissue from that primarily affected, it becomes us not to be passive spectators of an unequal contest, but to avail ourselves of every measure which offers any probability of success: for these reasons, therefore, we ought to have recourse to the plan of counter-stimulation.

Tartarized antimony, the action of which has been lately so much investigated, is indeed a most efficient auxiliary in peritonitis. Should it excite inflammation of the alimentary canal, it arrests the progress of that in the peritoneum, which is far more dangerous; if it only quickens

the action of the mucous follicles, the excess of action on their part, will occasion an opposite state of the serous membrane; lastly, the counter-stimulant property of this substance, sufficiently ascertained as it respects other diseases at least, laying aside all theory, deserves the attention of every practical physician, whose office is to remove or mitigate disease at the bedside of the sick, not to arrange theories amidst the abstractions of the cabinet.

Tartarized antimony, then, exhibited merely as an aperient, or in a larger quantity, according to the method of Rasori, may be employed in intense inflammation of the peritoneum, without interfering in any degree with the ordinary antiphlogistic measures. The counter-stimulant plan is particularly useful, when the debility of the patient makes the abstraction of blood dangerous: laxative doses, on the contrary, are better adapted to cases in which a bilious complication exists, as in certain epidemics: in some cases, even ipecacuanha emetics may be resorted to, as was done with the happiest effect, by Dailcet. See the work of this author on puerperal fever.

The sympathetic vomiting which attends peritonitis, by no means contra-indicates the employment of tartar-emetic; it is necessary, however, in such circumstances, to combine an opiate with it, otherwise it may be thrown up, and the patient lose all the benefit of it. Mild laxative and cooling drinks should be recommended. Enemata are injurious throughout the first stage of peritonitis, but when the patient is becoming convalescent, and the bowels are confined, they are very useful.

Preparations of mercury, whether exhibited internally, as twelve or fifteen grains of calomel alone, or combined with extract of hyosciamus or opium, taken in the course of twenty-four hours, or

rubbed in over the abdomen or thighs, so as to produce salivation, has been equally extolled in cases of acute peritonitis, when employed along with the general and local abstraction of blood.

The treatment of puerperal peritonitis is very similar to that already described. The practitioner has the advantage of knowing the susceptibility of a female, who has been lately delivered, to this inflammation, and may thus sometimes check it at its onset, or prevent its developement by judicious care; guarding his patient against exposure to cold, the total suppression of the lochia, or powerful mental emotion; by encouraging the flow of milk, and prohibiting all stimulants, which the attendants are so apt to think necessary in such circumstances. See the word *Metritis*.

When an attack of peritonitis has been occasioned by a spontaneous perforation of the small intestine, its progress is extremely rapid; an antiphlogistic treatment, even if employed without a moment's delay, would be totally inefficacious, since it could exert no influence over the cause, and the contents of the alimentary canal would constantly be escaping into the peritoneal cavity. Absolute rest is our only resource and ground of hope; no warm bath, no purging, no tartarized antimony can be allowed; an enteritis is the source of the evil: so that nothing, not even a little water, may be taken into the stomach, but the patient must satisfy his thirst by sucking slices of lemon. Mercurial ointment may be rubbed in at the groin and axillæ, but nothing can be expected, except from the efforts of nature. Yet, when there is no doubt as to the existence of this disease, it is not allowable to expose the intestine by means of an incision made over the termination of the ilium, and retain on the outside of the abdomen, the perforated portion of intestine, which is often very small; at the same time we are

combating inflammatory symptoms by an energetic antiphlogistic plan of treatment, and by mercurial friction? In short, are we not called upon to avail ourselves of any chance of escape from a disease so rapidly and certainly fatal? We leave this question to the consideration of those who, like ourselves, know what it is to see patients who were apparently recovering from an attack of enteritis, suddenly fall victims to this spontaneous perforation.

When inflammation of the peritoneum has become protracted, and effusion has already taken place, it will be proper to have recourse to laxatives and diuretics, unless they excite fever; vapour baths, dry rubbing, wearing flannel, and every other means calculated to promote the functions of the skin, may also be employed with advantage. A very strict regimen, and abstinence from any thing likely to excite irritation in the digestive organs, are indispensable.

Even at this late period, should the patient's strength be sufficient, the moderate abstraction of blood may be beneficial, by promoting absorption, and especially by preventing those occasional remittent pains so common in chronic peritonitis.

This description of treatment would be very deficient, if it omitted what is indeed one of our most valuable remedies in chronic peritonitis, namely, habitual compression of the abdomen by means of a laced bandage gradually tightened. We have known this simple application succeed in the cure of very obstinate cases of perineal inflammation. Should the bandage occasion pain, the general or local abstraction of blood will enable the patient to support it without great uneasiness.

In regard to the application of counter-irritants, as issues, moxa, &c. to the abdomen, mercurial frictions, the internal exhibition of calomel, and, especially, drastic purgatives, we shall simply observe.

that all of them have occasionally proved successful. A judicious practitioner will not have recourse to them empirically, without some reasonable prospect of success. (See the word *Ascites*.)

[The employment of purgatives in peritonitis has been strongly condemned by British practitioners, especially by Dr. Armstrong, who recommends, immediately after bleeding continued nearly to syncope, the exhibition of four or five grains of opium, or one hundred drops of the tincture, for the purpose of preventing the hæmorrhagic reaction which follows the copious abstraction of blood, and the stimulus of pain, as well as of inducing diaphoresis and sleep.

Drs. Alison and Brown have both acknowledged the efficacy of this treatment: there is, however, one exception to it, namely, a dry, glazed state of the tongue, during the existence of which Dr. Armstrong has seldom found the exhibition of opium of much benefit.]

ASCITES.

Before entering on the treatment of ascites, the physician should make a general examination of the state of all the viscera of the body, particularly those of the abdomen; for thence only can he learn what remedies are adapted for any individual case. When dropsical effusion is occasioned by organic disease of the heart, liver, stomach, kidneys, or uterus, congestion of the spleen, a protracted intermittent fever, or a chronic peritonitis, the nature of these affections allowing little reason to hope for much amelioration, he must rest satisfied with palliative measures, carefully guarding against whatever is likely to accelerate the progress of the disease, or

disturb the general health, and at the same time endeavouring, by the exhibition of diuretics and diaphoretics, to remedy the deficient absorption of which the peritoneum, and, to a certain extent, other organs are the seat.

Whenever the patient is plethoric, complains of some local pain, or has not previously been bled, although not too weak to make the operation imprudent, venesection may be resorted to, and, if it seems useful, may be repeated.

We have often seen the abstraction of blood, even in cases already far advanced, effect the removal of the effused fluid, and the patient has regained his former health; but when a leucophlegmatic habit of body follows ascites, venesection is contra-indicated, unless both are recent, and exist in persons previously in good health, or affected with some cutaneous eruption.

If the stomach and bowels are unaffected, an emetic of ipecacuanha, given every second or third day, may prove of great benefit, by restoring the functions of the skin and promoting absorption. Purgatives also are often extremely useful, but it requires great discretion to accommodate them to the present and future condition of his patient, and they should be continued or discontinued according to effects.

When ascites is unattended with fever, the following measures should be tried; the application of counter-irritants to the abdomen, the internal exhibition of digitalis, acetate of potash, squill, acetate of ammonia, compound powder of ipecacuanha, juniper, white wine, diuretic drinks, as whey, &c. containing in each pint one or two scruples of cream of tartar, or nitre, the application of blisters to the thighs, frictions over the abdomen with the tinctures of digitalis, squill, or guaiacum, fumigations with vinegar, elderflowers,

sage, juniper berries, and, lastly, the preparations of iron and cinchona, if the dropsical effusion has supervened on intermittent fever, and there is no appearance of peritonæal inflammation: eruptions, discharges, and old ulcers, must be re-established, if there is any reason to think their repression has exerted any injurious influence. But whatever plan of treatment it may be thought proper in other respects to adopt, one thing is essential, viz. the employment of a laced bandage, made gradually tighter; the patient should continue wearing it, even after his recovery.

If none of these measures succeed, but the abdominal distention increases to such an extent as greatly to impede respiration, the operation of paracentesis will afford temporary relief; after this operation the bandage is peculiarly necessary.

When the patient is gradually sinking under a slow fever, it will be useless torture, and hasten the progress of the disease, to employ active treatment; the practitioner must rest satisfied with prescribing bland nutritive fluids, as milk, barley water, and gruel; alleviating pain, when it exists, by opiate injections, frictions with some narcotic tincture or ointment, or by draughts, containing acetate of morphia, tincture of opium, or sirup of poppies, and endeavouring to render the unhappy sufferer as comfortable as his situation will permit.

The treatment of encysted dropsy consists in the general measures recommended for ascites, and the operation, which is in fact almost the only remedy. (See *Peritonitis*, *Intermittent Fever*, *Measles*, *Scarlatina*.)

DISEASES OF THE TISSUES.

DISEASES OF THE SKIN AND CELLULAR AND MUCOUS TISSUES.

STROPHULUS.

[EXPOSURE to undue degrees of heat and cold, the irritation of rough flannel clothing, want of cleanliness, and errors in the kind or quantity of food given to children, are the principal sources of this affection; and their removal is generally sufficient to effect the removal of strophulus, without any medical treatment, either external or internal, except the employment of tepid baths and light aperients. See also *Stomatitis*.]

LICHEN.

[The different species of lichen appear to be little more than different degrees of the same affection, and require the same treatment. A low diet and regimen, avoiding exposure to the heat of the sun and violent exertion; tonics, especially the sulphate of quina combined with the infusion of roses and diluted sulphuric acid, and in obstinately protracted cases, the solution of arsenic, are the principal re-

Note.—The Sections on Diseases of the Skin, which are included within brackets, have been principally compiled from the works of Bateman, Plumbe, and A. T. Thompson. *Trans.*

medies; the troublesome itching is to be allayed by sedative, and in slight cases, moderately stimulating lotions.]

PRURIGO.

[Cleanliness, the use of the tepid bath, and a proper regulation of diet, are the most important remedies in prurigo: yet the abstraction of blood and purging, or, on the contrary, the exhibition of tonics, will occasionally be necessary; as external applications, artificial sulphureous baths, lotions, with calomel and lime water, oxymuriate of mercury, prussic acid, and acetate of ammonia, often afford great relief.]

LEPRA.

[The principal points in the treatment of lepra are, the maintenance of the general health, and invigoration of the constitution, with a debilitated state of which it is generally connected: the internal exhibition of arsenic, or the oxymuriate of mercury, combined with some tonic decoction, may be beneficial; also, as external applications, blisters, lotions containing prussic acid, liquor potassæ or muriatic acid, with frictions, and sulphureous baths, for the purpose of loosening and detaching the tenacious scales.

Occasionally, the disease occurs in an inflammatory state of the system; in which case, bleeding and purging must precede the use of tonics and stimulants.]

PSORIASIS.

[The most effectual remedies in psoriasis, appears to be the liquor potassæ, in doses of ℥ xx gradually increased to ℥ c daily; as next in efficacy, may be mentioned the arsenical solution: when occurring in a plethoric or inflammatory state of the system, moderate antiphlogistic treatment is necessary.]

PITYRIASIS.

[Pityriasis is, in general, a merely local disorder, and requires no other medical treatment than the employment of slightly stimulating lotions.]

ICTHYOSIS.

[This affection is very little under the influence of medicines taken internally; the best external remedies are the warm bath, moderate friction, and compression.]

URTICARIA.

[If urticaria is the consequence of having eaten lobsters, muscles, or any similar unwholesome food, we should first evacuate the stomach by a powerful emetic, and then administer vinegar and acidulated drinks; afterwards, nothing more will be necessary than to prescribe spiritous or other lotions, to allay the intolerable itching which accompanies the eruption.]

Urticaria occurring along with gastro-enteritis, requires no particular treatment. See *Gastro-enteritis* and *Poison*.]

ERYTHEMA.

[Mild laxatives, followed by the mineral acids, comprehend all the medicines necessary in this affection ; as a local application, however, a spiritous lotion, containing prussic acid, is very useful in allaying the pain and troublesome itching which attend.]

PURPURA.

[When purpura occurs in persons enjoying good general health, and suffering no privation of food or pure air ; and when it is accompanied with symptoms of fever or internal inflammation, an antiphlogistic treatment must be resorted to ; on the contrary, when the exciting causes and the condition of the patient indicate the depression of the vital powers, tonics, wine, and the mineral acids, in conjunction with exercise in the open air, are indicated.]

ERYSIPELAS.

In simple inflammation of the skin, unaccompanied with much fever, that is, when the cutaneous affection seems likely to terminate without involving in the inflammation the organs contain-

ed in either of the three splanchnic cavities, and without suppuration of the subcutaneous cellular tissue, it is unnecessary, even when the erysipelas attacks the face, to do much more than to confine the patient to diluent acidulated liquids, keep the bowels open by mild aperients, order the feet to be placed in hot pediluvia impregnated with mustard, and prescribe a purgative injection.

But when erysipelas comes on with strong febrile reaction, and the patient is young, the copious abstraction of blood from the arm is necessary, especially if the inflammation is seated in the face, head, breast, or any part in which the cellular tissue is abundant, and may become involved in the cutaneous inflammation. We must early endeavour to guard against its extension to the internal organs, especially the brain, which is very apt to occur when erysipelas occupies the head. In this last case, whenever there is much tumefaction, it will be proper immediately after the abstraction of blood from the arm, to apply leeches to the neck, in no less a number than forty or sixty in an adult, so as completely to arrest the progress of inflammation; however, it is well to adopt the precaution of applying twelve or fifteen only at a time, that the flow of blood may be readily checked, if any bad consequences appear to ensue from their application.

If the patient is plethoric and has borne the abstraction of blood without inconvenience, a second bleeding from the arm will be advisable. But these measures can be employed with benefit only during the first two or three days of the erysipelas, and in cases where there is reason to apprehend the supervention of a cerebral affection. When symptoms of arachnitis arise, the proper remedies, as before described, (see Arachnitis,) must be resorted to; and, if the eruption has reced-

ed, a blister should be applied to the original seat of it.*

Lastly, an antiphlogistic plan of treatment is never more useful than when inflammation of the skin has been produced by some external cause, as a wound, exposure to the sun, &c.

When erysipelas and gastro-enteritis occur together, the proper treatment of the latter is generally sufficient to effect the cure of the former; but if the cutaneous irritation is very great, it will be proper to apply leeches around the affected part. (See *Gastritis*, *Gastro-enteritis*.)

If the tongue, instead of being dry and red, as it is when inflammation of the mucous membrane exists, has, on the contrary, a thick white or yellow fur, without any trace of redness or dryness at the apex, or around the border; if the patient complains of a bitter taste in the mouth, and the erysipelas has appeared in consequence of damp weather, after having been subjected to a bad diet, or at a time in which most prevailing diseases assume a bilious character, evacuations of the primæ viæ are much more efficacious than the abstraction of blood, and the experience of the ablest practitioners of all ages, will justify us in having recourse to them. For this purpose an injection, containing a grain of tartarized antimony, is well adapted; and we should persevere in this mode of treatment, unless some unfavourable symptom should occur which is evidently attributable to it. We may thus hope to prevent the erysipelas from extending itself over several parts of the cutaneous system.

When the erysipelatous affection moves from place to place, or, while it does not leave its origi-

* See the Author's "*Traité de l'Arachnitis Cerebrale et Spinale*."

nal seat, appears also at some other part, in imitation of rheumatism, the condition of the different viscera, especially the serous membranes, requires the most vigilant care; the tendency to inflammation should be counteracted by the abstraction of blood, and by the exhibition of aperients, unless the mucous membrane of the bowels is inflamed; blisters should be applied to the extremities, and vesication kept up, if the case appears likely to prove very serious; in a word, suitable means must be resorted to, whatever complication may arise. Some practitioners endeavour to fix the erysipelas, or rather, to change its character, by applying a blister in the very centre of the inflammation. This method of treatment might prove dangerous, and even produce sloughing, if the cutaneous irritation were great, the patient plethoric, or the erysipelas of the ædematous kind, or attacking an individual of cachectic habit, and previously out of health; still more if it assumed a gangrenous character.

During the prevalence of very fatal epidemics, and in typhus, erysipelas is apt to terminate in gangrene; little, therefore, can be done in these cases by directly attacking the secondary affection of the skin; and our attention must be principally directed towards the primary disease. (See *Typhus*.)

But when the original character of erysipelas is gangrenous, a peculiar plan of treatment is indicated: tonics, generous wines, the nitric oxide of mercury, as an escharotic, the application of the powder of bark, or lint wetted with a solution of the chloride of lime, in a word, every antiseptic remedy, external or internal, should be employed. (See *Malignant Pustule*.)

Lastly, wherever this inflammation may be seated, it will be necessary, should it terminate in suppuration, to evacuate the pus as early as possible, and, if

confined under the hairy scalp, or any other part where the anatomical disposition of the integuments is similar, numerous and deep incisions will be required for the purpose of giving exit to it.

When the cessation of a menstrual or hæmorrhoidal discharge, an habitual bleeding, or a cutaneous eruption, has occasioned erysipelas, it is necessary to re-establish it, or supply its place by the general or local abstraction of blood, or the insertion of an issue, &c. Similar precautions may be employed with much benefit against the periodical returns of this affection.

Erysipelas arising from some local source, as a blister, issue, wound, &c. requires nothing more than the application of emollient cataplasms, soothing lotions, and local baths.

[The employment of incisions in erysipelas having lately attracted much attention in this country, it may be useful to describe this remedy somewhat more fully than has been done in the text.

It is only in phlegmonous erysipelas, that is, in erysipelas attacking the cellular texture, as well as the skin, that incisions are advisable. They are most effectual when the disease is seated in the extremities: when in the face, they are seldom necessary, but when under the aponeurosis of the head they are very beneficial. The length to which incisions should be extended varies according to the circumstances of each case, such as the strength of the patient's constitution, his habit of body, the extent of the disease, &c. Numerous short cuts, or a single long incision, will equally answer the end; the incision should divide the skin, and the cellular texture down to the fascia; it is not necessary to penetrate the latter. A double-edged bistoury is the most convenient instrument for the purpose."—*Medico Chir. Trans.* vol. xiv.]

PEMPHIGUS.

Pemphigus, when occurring alone, is in no respect dangerous, and does not require active treatment; at first, nothing more is necessary than to enjoin strict cleanliness, and to protect the affected parts from getting rubbed. If the vesicles are few in number, they should be punctured sufficiently to evacuate their contents, and dressed with spermaceti ointment. But when the inflammation of the skin is extensive, and attended with fever bleeding from the arm will be proper. Medicine exerts little or no power over it, and it will be useless to prescribe any thing but mild diluent drinks.

Chronic pemphigus may be benefited by emollient tepid lotions, or warm bathing, and by oleaginous and narcotic embrocations, if attended with much itching; the patient should be confined to a light diet, as milk, and, if there is no appearance of inflammation in the bowels, aperients may be occasionally administered with advantage; lastly, if these remedies fail, a change of residence should be recommended.

When pemphigus occurs in advanced life, and is connected with general debility, or seems likely to terminate in gangrene, tonic medicines, as cinchona, bitters, a generous diet, and an allowance of wine, are the most important remedial measures.

[This troublesome disorder appears generally connected with debility; and in consequence, a tonic, yet not stimulating plan of treatment, is indicated; much purging is useless and even injurious; the excoriations which follow the rupture of the vesicles, should be dressed with some mild ointment, or they may be touched with the nitrate of silver.]

IMPETIGO.

[Calomel, in doses of five or six grains, taken occasionally at bed time, and succeeded by a cathartic in the morning, appears to be peculiarly beneficial in this complaint: sulphur combined with soda, &c. and the vegetable acids with conium, have also been recommended. To allay local irritation, nothing is so effectual as prussic acid, properly diluted, and combined with the acetate of lead. It can scarcely be necessary to observe, that in this, as in every other instance, the hydrocyanic acid must be employed with the utmost caution, and its effects upon the pulse carefully observed.

To remove the dry incrustations, the sulphur vapour bath, hot water, and emollient poultices, may be employed.]

PORRIGO-TINEA.

In every species of tinea, it is highly important, as soon as the complaint appears, to keep the head covered with emollient cataplasms, and lotions, to loosen and detach the crusts, while counter-irritation is excited in the superior extremities by means of blisters. When there is considerable itching, with heat and redness of the skin, a few leeches applied to the hairy scalp will sometimes occasion great relief. If, on the contrary, there is little irritation of the skin, sulphureous washes and ointments will be more useful.

But when the inflammation has extended to the follicles of the hairs, it is necessary to eradicate them: this operation may be performed by plucking them out one by one with a pair of forceps,

or by application of a strongly adhesive plaster to the affected part, to be forcibly torn off.

The tinea of children being often a salutary discharge, it is proper, after its cure, to supply its place for a time by a blister; and if it has supervened on any serious disease, it will be imprudent to attempt its cure.

[When the general health is impaired, its improvement should be attended to, previous to the adoption of any local treatment. In incipient ring-worm, the best external application, after the head has been shaven, is undiluted mineral acid, applied by means of a feather, over every affected spot, and allowed to remain on for a few minutes: after each application of the acid, the head should be repeatedly washed in warm water. When there is excessive irritation of the scalp, the hair should be removed by finely pointed scissors, in preference to a razor, and for the first few days, no stronger external application than frequent ablution with very hot water will be advisable. In obstinate cases, the removal of the hairs affords the only hope of recovery; this may be effected with little suffering by the application of a poultice, and afterwards of a lotion with the liquor potassæ; the hairs may also be extracted one by one with a pair of forceps. In promoting the restoration of hair, that is, in *porrigo decalvans*, nothing is so useful as shaving round the bald spot, and the assiduous application of spirit of turpentine, or any volatile oil.]

PORRIGO FAVOSA, LARVALIS.

[This disease is generally connected with disorder of the general health. A strict and judicious regulation of diet, and the employment of aperients, alteratives, and tonics, are the most important remedies: as local applications, ablution with tepid water, emollient cataplasms, and the unguentum hydrargyri nitratis dilutum, will be found useful.]

ECTHYMA.

[This affection is, perhaps, invariably dependent on debility of system; consequently, its treatment consists in the use of nourishing food, change of air, mental relaxation, and the exhibition of alteratives and tonics. When the patient suffers much from local irritation, a lotion containing acetate of lead and prussic acid will afford great relief.]

PSORA-SCABIES.

When psora exists to a considerable extent, and has already continued during a long time; when the patient is young, plethoric, and complains much of intolerable itching; and when the skin is greatly inflamed, it will be proper, before adopting any other measures, to begin our treatment with a bleeding from the arm, and the employment of the warm bath; otherwise, we may at once resort to the various empirical remedies which experience has sanctioned; the principal of these is

sulphur, and indeed there are few cases of genuine psora, which will not yield to its steady employment.

The ointment recommended by Helmerich, is composed of two parts of sulphur, one of pure potassa, and eight of lard; it is to be used after the surface of the body has been well washed with soap and water. An ounce of it should be rubbed in before the fire, three times every day; the skin being afterwards again thoroughly washed in the same way.

Pyhorel's plan is to combine a scruple or half a drachm of the sulphuret of lime with a little oil, and rub the affected parts with it, morning and evening.

The sulphur ointment is to be employed to the amount of an ounce, twice during the day, over the whole affected surface.

A solution of four ounces of the sulphuret of potash in a pint and a half of water, to which is added half an ounce of sulphuric acid, applied twice during the day, as a lotion, may be substituted for the ointment, and is in one respect superior to it, viz. in soiling the clothes of the patient much less; it must be remarked, however, that it sometimes excites great irritation of the skin. Lotions of alcohol and soap may also be substituted, when this medicine is very strongly objected to; but they are much less efficacious. Hellebore, staves acre seed, opium, the ointment of the nitrate of mercury, remedies formerly much employed, are now exploded.

The clothes of the patient should be thoroughly fumigated with sulphur, and cleanliness, and frequent bathing, enjoined afterwards.

HERPES.

{This eruption cannot be repressed, or its course abridged, by any medical treatment; attention to the general health is, however, highly important in preventing its extension and continuance; the local uneasiness may be much alleviated by a lotion of diluted alcohol and the liquor plumbi acetatis dilutus: relief may also be afforded by puncturing the vesicles. In the cure of *herpes præputialis*, the most important point is cleanliness.]

FURUNCULUS—ANTHRAX.

When the practitioner has been called in too late to arrest the progress of inflammation in this affection, the only thing that remains to be done is to hasten suppuration, by the application of hot emollient poultices, or of the ceratum resinæ over the centre of the tumour: but when the patient is seen soon after the boil has appeared, the summit of it should be touched with caustic, or rather, if there is much inflammation, and the pain very severe, a deep incision should be made into it, to remove the tension of the skin; which, however, it would be still better to prevent, by applying, at an early period, a large number of leeches over the tumour. If the boil is of very small size, and depends on a disordered condition of the digestive organs, aperients should form the basis of treatment, and they must, in such cases, always be continued for some time after the complete disappearance of the tumour. But if it attends inflammation in the alimentary canal, it will be necessary to have recourse to the

measures before recommended under the word *Gastro-enteritis*.

The treatment of anthrax should be the same as that of ordinary furunculus; it consists always in arresting the disease by cauterization, and copious local bleeding: a deep crucial incision is necessary to prevent gangrene of the cellular tissue.

The use of the tepid bath, and diluent and acidulated drinks, may afterwards be advantageously employed. Whenever a common boil, or anthrax, is opened, it is proper to promote suppuration by means of some digestive application, and to wash the wound with a solution of the chloruret of lime.

MALIGNANT PUSTULE—CARBUNCLE.

The principal indication in both these affections, is to prevent the communication of the malignant matter to the surrounding parts, and through the system generally.

This, to a certain extent, may be effected by the application of escharotics, as the nitric oxide of mercury, at an early period of the disease, before the supervention of gangrene; after which, the plan which we must adopt, consists in making incisions across the tumour, not so deep as to wound any blood vessel, yet not too superficial; (otherwise, in all probability, the malignant matter will not be evacuated,) in removing, by means of a pair of forceps, the gangrenous shreds, and afterwards cauterizing the bottom of the wound with nitric oxide of mercury, to an extent beyond that of the disease. The whole affected surface should be covered with lint, and compresses imbued with a decoction of bark, or solution of the chloruret of lime: or, we may sub-

stitute for these, a kind of cataplasm made of the powder of kino and spirit of camphor.

Together with this local treatment, the principal resource in endeavouring to check the progress of malignant pustule, we may also, with considerable benefit, prescribe the internal exhibition of the most powerful tonics, stimulants, and antiseptics; for instance, cinchona, sulphate of quina, camphor, spirit of mindererus, rich wines, acidulated drinks, and, above all, the solution of the chloruret of soda; the action of these medicines may be assisted by the addition of ammonia, a hot infusion of serpentaria, and, in fact, by any thing calculated to excite perspiration. This plan of treatment is, however, indicated in those cases only, in which a general infection of the system accompanies the local disorder, or, in consequence of the late application of caustics, is likely to ensue.

The prevention of this affection consists principally in the exercise of care, on the part of those persons whose occupation obliges them to touch the remains of animals affected with any malignant disorder, to wash the hands immediately afterwards in a weak solution of the chloruret of soda.

OPHTHALMIA.

In a slight attack of acute ophthalmia, it is seldom necessary to do more than preserve the eyes from the influence of light and fire, bathe them with an emollient narcotic collyrium, employ irritating pediluvia, and laxatives or diluent drinks, and lastly, to prohibit wine, spiritous liquors, coffee, &c. Cataplasms are useful whenever their weight does not increase the pain.

If the sensibility of the eye is very great, and the

pupil contracted, the extract of belladonna should be applied around the base of the orbit, or a few drops of the aqueous solution of this plant may be introduced between the eyelids.

In a severe attack of ophthalmia, attended with much pain, a copious abstraction of blood from the arm must be made without delay. If the patient is plethoric, young, disposed to inflammatory attacks, and very feverish, the operation should be repeated the next day, while we act on the alimentary canal by means of purgatives, and endeavour, by repeated leeching and cupping, to remove the inflammation in two or three days; lastly, as soon as the fever and pain have subsided, and the redness of the conjunctiva has disappeared, much benefit may be derived from the application of a blister to the nucha. By this active treatment, we may hope to counteract the tendency of ophthalmia to become protracted. As auxiliary measures, we should recommend the patient to keep his head elevated, to live in a dark chamber, and rigorously restrict him to an antiphlogistic diet.

If the patient lies awake and restless during the night, an opiate draught should be prescribed at bed time.

When ophthalmia is attended with a purulent discharge, a circumstance which requires that the part should be kept constantly bathed, it is proper, at soon as the pain of the eye has ceased, and the acute stage quite passed away, to employ some astringent collyrium, as infusion of roses, with a few grains of sulphate of zinc, sulphate of copper, or acetate of lead; or a weak solution of alum, with a few drops of the tincture or wine of opium. But the most efficient remedy is the perfect exclusion of light, maintained for a long period; and its adoption will be likely to prevent relapse, so common in ophthalmia, and any occasion for the abstraction

of blood, and the various other measures which are generally necessary in chronic ophthalmia. The patient must abstain from reading, and working by candlelight, and avoid hot rooms, and stimulating food, even for a considerable time after convalescence has begun.

When ophthalmia is kept up by tumefaction of the conjunctiva, new growths on that membrane, or a varicose state of its vessels ; or when it depends on the presence of some foreign body, the first duty of the practitioner is to perform the operation indicated by these various circumstances. If, on the contrary, it has arisen in consequence of the suppression of some periodical evacuation, or the discharge from an old ulcer, these different discharges must be reestablished before any direct local application can be of avail ; syphilitic or scrofulous ophthalmia is to be removed by removing the habit of body on which it depends ; the insertion of an issue or seton should, however, not be omitted.

In gonorrhœal ophthalmia, the most active treatment is necessary ; both general and local blood-letting must be carried to a great extent, while we endeavour to bring back the inflammation of the urethra, by the introduction of bougies smeared with matter furnished by the conjunctiva. Calomel blown into the eye every morning, the tincture of opium dropped between the eye-lids in the evening, and the exhibition of cubebs, are useful auxiliary measures.

The principles of the treatment of chronic ophthalmia should rest on those which we have already laid down. But, in addition, it will be necessary to recommend the patient to abandon every employment which has an injurious influence on the sight, and to wear constantly green or blue spectacles. If the alimentary canal is in a healthy

condition, it may be made the seat of a more or less powerful revulsion, by means of purgatives, &c. General friction, the employment of vapour baths, the insertion of a seton, applying caustic applications to the sinciput, or mastoid regions, scarification of the conjunctiva, lotions with the solution of the muriate of baryta, the insufflation of calomel, alone or combined with an equal quantity of sugar candy, and, lastly, dropping into the eye, by means of a camel's hair pencil, one or two minims of the tincture of opium, two or three times daily, are also useful auxiliary measures. In a plethoric habit, a bleeding from the arm should precede the use of the opium collyrium.

In intermittent ophthalmia, we must have recourse to cinchona, sulphate of quina, opium, and the removal of the various exciting causes of this inflammation, that we must principally rely during the intervals between the attacks, as it is by the ordinary antiphlogistic remedies that they must be attacked.

CORYZA.

A slight attack of coryza is in general easily got rid of, by the free employment of diaphoretic drinks, care being taken, at the same time, to avoid exposure to the damp and cold air. When it is more severe, very hot pediluvia, emollient fomentations, a few leeches to each nostril, rest in bed, and a low diet are indicated. As coryza impedes respiration through the nasal fossæ, infants at the breast, who are attacked with it, require to be fed with a spoon while it continues.

When coryza is protracted, under a chronic form, or is apt to return on the slightest exposure to cold,

a flannel dress next to the skin, and especially woollen stockings and socks during cold damp weather, together with habitual dry rubbing, should be recommended. The application of a blister behind the ear, purgatives, and even the insertion of an issue, may be resorted to, if, as rarely happens, the severity of the case renders it necessary. Lastly, if disease of any important organ supervenes on the suppression of an habitual coryza, it is proper either to re-establish the secretion of the sneiderian membrane, or supply its place by an artificial discharge.

OTITIS.

The first object to which a practitioner should direct his attention, when called upon to prescribe for a patient afflicted with pain in the ear, is, to ascertain whether any foreign body exists in the external meatus. When ear-ache proceeds from inflammation, blood must be drawn from the arm; and the pain, if very severe, may be calmed by emollient fumigations, narcotic injections, &c. Perspiration should be promoted by hot drinks, as the infusion of camomile, common tea, and the feet immersed in mustard pediluvia, several times during the day, while the bowels are kept open by means of purgative enema: if, notwithstanding these precautions, otitis goes on to suppuration, the discharge of the pus must be promoted by syringing the ear, or by perforation of the membrana tympani, in cases where the internal ear is the seat of inflammation, and there is no other way by which the pus can escape.

In chronic otitis, which almost always depends on caries of the bone, and scrofula, the insertion of an issue or seton in the neighbourhood of the ear, or at

the nucha, injections into the external meatus of warm water with honey, and afterwards, as the discharge diminishes, with the decoction of cinchona, or lime water, will be proper. Great attention is necessary to prevent secondary inflammation of the brain or its meninges, which is very apt to supervene. Lastly, the bowels should be kept freely open, and the internal treatment proper in cases of syphilis, or scrofula, must be employed whenever otitis depends on one or other of these diseases.

After perforation of the tympanum, a plug of cotton should be worn in the ear, to moderate the increased intensity of sound.

When chronic otitis depends on the suppression of any natural or accidental discharge, as an ulcer, or cutaneous eruption, the remedy most likely to prove successful, is the restoration of the primary affection.

DISEASES OF THE MUSCULAR, FIBROUS, AND SYNOVIAL TISSUES.

TETANUS.

TETANUS, whether consequent on a wound or not, is a symptom of inflammation in the spinal marrow, or in its arachnoid membrane ; the treatment therefore of these affections is equally that of tetanus ; when it is one of the symptoms of hydrophobia, it requires no particular attention.

The tetanus which appears idiopathic is almost invariably fatal under every form of treatment. Opium, in large doses, musk, cinchona, assafœtida, castor, phosphorus, valerian, carbonate of soda, ammonia, drastic purgatives, tartarized antimony in doses of twelve grains or a scruple daily, mercurial frictions carried to salivation, cold affusion, vapour baths, the *neuropathic* method of Dr. Ranque, (see *Colica Pictorum*,) galvanism, and the abstraction of blood, have all been resorted to, and many have seemed successful, but it is doubtful whether one case has been really cured by any of these various remedies. For this reason we simply enumerate them, and we recommend the practitioner to direct his whole attention, from the earliest appearance of tetanus, to the state of the spinal marrow ; and, if any external wound can be detected, let him examine whether some foreign body, spiculum of bone, or wounded nerve, is not the occasion of all the symptoms ; lastly, whatever plan of treatment he may think proper to pursue, it should be regulated by the condition of the patient, and the severity of the symptoms.

ARTICULAR RHEUMATISM.

As soon as pain occurs in any of the articulations, and its integuments become red and swollen, it is necessary, without waiting for more decided evidence of the existence of rheumatism, to apply around the affected joint a sufficient number of leeches to remove the inflammation at once: afterwards, emollient and narcotic cataplasms are to be placed over the inflamed surface, and perspiration at the same time excited by hot diaphoretic infusions, as tea, &c. At this period, also, the exhibition of the extracts of hyosciamus, aconite, and especially crude opium, in doses of half a grain or a grain every hour, is of the greatest benefit. But the degree of fever, and the condition of the *primæ viæ*, must modify the principles of treatment which we have just mentioned.

Thus, if fever has preceded the articular inflammation, and the patient is young, it is more prudent to abstract blood from the arm once or twice before applying leeches, the number of which should be larger or smaller, according to the severity of local inflammation, and the extent of the surface affected. But, although we thus recommend an antiphlogistic plan of treatment, we do not mean to assert that it is successful in every case; the local inflammation is certainly much lessened, and often completely removed by it; but though the disease is thus driven from one part, a metastasis to another often occurs, and the duration of the rheumatism is very little, or not at all, abridged. However this may be, the local abstraction of blood is free from objection; it generally alleviates pain, and almost always prevents rheumatism from passing on to suppuration, a mode of termination much to be dreaded in

every articular inflammation. In every case, emollient cataplasms sprinkled with laudanum should, as well as leeches, be applied to the joint.

When the stomach and bowels are in a perfectly healthy condition, and several of the articulations are affected at the same time; or when the rheumatism appears to be owing to excessive mobility of the system, it is very advantageous, provided that the patient is free from fever, to have recourse to the employment of tartarized antimony, a method of treatment which has been as unjustly condemned on the one hand, as it may have been injudiciously eulogized on the other. No remedy, however excellent, proves invariably efficacious, and though that of which we are now speaking forms no exception to the general rule, it is successful in a sufficient proportion of cases to deserve the attention of a practitioner who pays deference only to the voice of observation, and knows the obstinacy of a rheumatic affection. In many instances, though not in all, this medicine greatly abridges the continuance of articular inflammation. To exhibit tartarized antimony to the amount of six, eight, ten, twelve, or more grains, in the course of the day, is repugnant to the prejudices of our education, and many practitioners, although they might believe in its efficacy, would rather leave a patient to himself, to recover or not as it might happen, than obtain a cure purchased, in their estimation, at so dear a price. But we can assure them that daily experience demonstrates the safety of this treatment, and that it is very often supported without the least inconvenience; the addition of a small quantity of sirup of poppies, for instance, half an ounce, is generally sufficient to prevent it from acting either as an emetic or as a purgative; and, if it should produce a few evacuations from the bowels,

is that a sufficient reason for rejecting a probable remedy against a most obstinate disease? besides, we continually observe during its purgative action, the fever lessen, the local inflammation disappear, and the rheumatism, disturbed in its seat, move about from part to part, and soon leave the patient altogether. It is, therefore, in our opinion, not only justifiable, but imperative on the part of the practitioner, in every case of rheumatism which is, or is likely to become, general, to employ the tartarized antimony: six grains, in a mixture containing half an ounce or an ounce of the sirup of poppies, is a suitable dose to begin with, and, on every succeeding day, it should be increased by the addition of two grains to the amount taken the day before, until the articulations are no longer tumid and painful; but, if the stomach and bowels are much disordered by it, or if at the end of the week the patient is little or no better, a sufficient trial has been allowed it, and some other plan of treatment must be substituted. Throughout the period during which the tartarized antimony is taken, copious mucilaginous drinks, especially gum water, should be recommended to the patient; and if much fever should exist, it will be advisable to draw blood from the arm: in like manner, if any articulation appears likely to suffer more severely than the others, the local abstraction of blood by means of leeches, together with the application of dry cupping glasses and blisters, below and around the joint, will be beneficial: lastly, as under circumstances, we may avail ourselves of emollient and narcotic cataplasms, and protracted local bathing, when it can be done without greatly disturbing the affected limb.

When rheumatism is attended with, and especially when preceded by a disordered condition of

the digestive organs, the tongue being loaded, the patient complaining of a bitter taste in his mouth, and evacuants being generally beneficial in the diseases which may happen to prevail at the time, it is proper to begin our treatment with the exhibition of an emetic, to be followed by purgatives; not, however, without keeping a strict watch over the alimentary canal, as well as over the seat of the primary affection, so as to persevere in or discontinue this plan of treatment accordingly.

The attempt to cure rheumatism simply by diaphoresis, has never appeared to us very successful when the disease was once fairly established, or existed to any considerable extent; for, in fact, most rheumatic patients are spontaneously affected with abundant perspiration, and the continuance of their disease does not appear at all regulated by it. Nevertheless, when the attack is but slight, confined to a few articulations, and appears to have arisen from diminished perspiration, it will be very proper to prescribe antimonials, Dover's powder, hot aromatic drinks, or fumigations, which may be directed into the bed by means of a tin tube. On this subject, we may remark that the oil of turpentine, which generally excites abundant diaphoresis, appears to possess very little influence on acute rheumatism.

Numerous other remedies have been proposed, and often much employed, sometimes with great success, at other times without any: among these may be enumerated colchicum, cinchona, sambucus combined with nitre, camphor, ether, ammonia, spirit of mindererus, &c. It may be easily conceived that, in a disease so obstinate and susceptible of sudden changes as rheumatism is well known to be, in a disease in which an inflammation of the greatest severity in a moment disappears, and as suddenly reappears in some other place, we are pe-

cularly liable to be deceived respecting the action of its remedies. On the other hand, these may fail in consequence of individual peculiarities, as in cases where ankylosis, caries, or disorganization of the articulating surfaces, has supervened on simple rheumatism, even in individuals apparently the least predisposed. Some persons seem so constituted, that, with them, when a disease has once established itself in any organ, it is almost impossible to eradicate it. In such circumstances, all that the practitioner can do is to recommend warm bathing, vapour baths, blisters, issues, moxa, &c. and he may congratulate himself if only so successful as to save the affected limb from amputation.

When articular rheumatism is on the decline, and the joints continue stiff and almost immoveable, warm bathing, and especially the employment of douches, should be resorted to.

It would be improper to conclude this chapter, without alluding to the method pursued by Professor Hildenbrandt, of Pavia, who regards rheumatism as resulting from a want of equilibrium between the heat and electricity of the body, and the heat and electricity of the atmosphere. In conformity to this theory, he covers the skin, especially the affected surface, with flannel, cotton, or glazed silk, previously impregnated with some resinous substance.

[This chapter, however long, will be imperfect, unless sufficient has been said to impress on the mind of the student the important truth, that rheumatism is not to be cured, like an ordinary inflammation, by the lancet. In the words of a modern author, "We cannot attempt to cure rheumatism by bleeding, and other evacuants, without imminent risk of causing metastasis (perhaps fatal) of the disease to an important internal organ, most com-

monly to the heart, its investing membrane, or both." v. Brown's Medical Essays.]

[One moderate bleeding is all that Dr. Brown ventures upon, after which he trusts to colchicum and opiate diaphoretics.]

[In regard to chronic rheumatism, a remedy, namely, acupuncture, has been proposed by Dr. Elliotson, which I am the more anxious to mention, from having had, through the kindness of this gentleman, ample experience of its value. "It is chiefly useful (observes Dr. E.) in the rheumatism of fleshy parts, and the more so as the disease is less inflammatory. Indeed when the parts are hot, or the pain is increased by heat, the remedy is generally useless, and cannot supply the place of antiphlogistic measures. One needle allowed to remain an hour or two in a part, is more efficient than several used but for a few minutes. The effects are often magical. The pain sometimes ceases while the needle is in the flesh, but generally three or six applications to each painful part are required." v. Med. Chir. Trans. vol. xiii.]

FIBROUS RHEUMATISM.

In acute rheumatism, of a muscular or fibrous structure, the abstraction of blood by cupping, or the application of leeches, over the punctures of which cupping glasses are applied, is peculiarly beneficial; indeed there are few cases of pleurodynia, lumbago, or stiff neck, in which such a treatment fails. Vapour baths, simple or medicated, sulphureous baths, friction with the compound soap or camphor liniment, the application of hot narcotic cataplasms, or a sinapism, over the part affected,

are, with the abstraction of blood, generally successful in fibrous rheumatism.

In a chronic stage, the same measures are to be adopted, with the addition of the employment of colchicum or the acetate of ammonia; and in these cases, the patient should be recommended to go warmly dressed, to wear flannel next the skin, and oiled silk over the affected parts. He should take daily exercise, and, when in his power, select a residence enjoying a southern or eastern aspect.

GOUT.

An attack of regular gout may sometimes be prevented, or at least rendered much less violent, by having recourse, on the first indication of its approach, to diaphoretic drinks, frictions, baths, and, if the patient is plethoric, to the abstraction of blood from the arm. But after its accession, a few leeches, when the inflammation is not very great, should be applied around the joint, and, afterwards, an emollient and narcotic cataplasm over it; but when there is a much higher degree of inflammation, it will not be advisable to attempt more than to keep the bowels open and guard against cold. In the intervals between the attacks, a vegetable diet, temperate habits, and, above all, regular exercise, must be enjoined. The patient should wear flannel next to the skin, taking care by this, as well as by other means, especially warm bathing, to keep up a free perspiration from the skin, and healthy condition of the surface. As for metastasis of gout, that is to say, disorders arising from the suppression of an arthritic attack, or simply occurring in a gouty habit, it is necessary to recall the original affection, if it has really been suppressed, or treat that which has

supervened, as would be proper under other circumstances. (See *Articular Rheumatism*.)

[The following is a short analysis of the plan of treatment recommended by Dr. Scudamore, in his treatise on this subject.]

[When a paroxysm is announced by any premonitory symptoms, it may sometimes be averted by prompt attention. If the true inflammatory diathesis be present in any considerable degree, general or local bleeding will be proper. Any tendency to hæmorrhoidal discharge should be promoted by aloetic and saline purgatives, and in all cases, constipation of the bowels should be obviated. Lastly, a furred tongue, heartburn, nausea, and acid eructations, indicate the propriety of administering an emetic.]

[*Treatment of the Paroxysm.*—General bleeding, however freely employed, affords very little relief to the local inflammation, especially to the pain. Nevertheless, when the pulse is full and hard, the skin hot, the urine scanty and high coloured, and the bowels, costive; or when any internal organ is affected with inflammation, venesection is certainly indicated, as if there was no gout present.—*Emetics* are indicated only for the purpose of evacuating the stomach of irritating contents; thus employed, they are a valuable remedy. It is on *Cathartics and Diuretics*, that the successful treatment of the paroxysm chiefly depends. Purgatives are useful, by unloading the bowels of fecal accumulations, removing vitiated secretions, and, in exciting the vascular system of the intestinal canal, occasioning depletion, which is also effected by diuretics through the kidneys. Colocynth, calomel, colchicum, and antimony, are the most suitable. In general these medicines should be administered until the gouty inflammation subsides, and so long as the urine deposits any considerable sediment, the stools have an unnatural appearance, or the tongue is furred.]

[In regard to colchicum given largely as a specific, it in most instances, for a few trials, influences the local symptoms very speedily; but so far from removing the cause of gout, it increases the disposition to it, and leads to the still more calamitous, because more constant, sufferings of the chronic form of the disease. These remarks apply equally to the *eau medicinale*.]

[*Sudorifics* are seldom of much benefit, and not only injure the stomach, but increase the susceptibility of the skin.]

[*Narcotics*.—The extreme pain which generally attends gout requires the administration of opium, which is contra-indicated only by a constipated state of the bowels, and by great febrile excitement: the pulvis ipecacuanhæ compos and the liquor opii sedativus are peculiarly useful.]

[*Local Treatment*.—The benefit of applying *leeches* to a joint attacked by gout is very doubtful; sometimes, when the local inflammation has been thus diminished, it has suddenly appeared in the other limb, and often, much debility of the joint seems to be the only result. *Warmth* is also injurious, for it is obvious, that confinement of morbid heat will increase the pain, and thus tend to prolong the disease; and if much perspiration is produced, relaxation and debility will follow. An opposite practice, that of applying *cold water*, has been recommended, but the relief thus produced is less than the danger, and never so certain, on account of the facility with which gouty inflammation is transferred from one part to another: yet a *trepid evaporating lotion* is equally beneficial and safe; it may be composed of one part of alcohol and three parts of mistura camphoræ, applied to the affected part by means of linen rags, previously made warm by dipping in hot water.]

[In conclusion, it must be remarked that attention to diet is the most important, and an indispensable part of the treatment of gout, not only during the paroxysm, but in convalescence.]

PHLEBITIS.

At the commencement of this inflammation, emollient and narcotic cataplasms, and local bathing, kept up for a long time, are the best remedies ; but, when it has made any considerable progress, both the general and local abstraction of blood become necessary to prevent the development of phlegmonous erysipelas, and the deep suppurations in which it generally terminates.

John Hunter employed, very successfully, in this affection, compression above the inflamed part. Dr. Goupil states that this remedy has proved equally successful in his own experience.* It has also been proposed to make a section of the vein, whenever it is not so large as to become the seat of a troublesome hæmorrhage, and its situation renders it easily accessible : this last method is the more worthy of attention, as it puts an effectual stop to the progress of the inflammation, which has a constant tendency to extend in the direction of the heart.

* See Nouvelle Bibliothèque Médicale, tome i. page 240, A. D. 1827.

NEURALGIA.

When neuralgia is seated in the face or hairy scalp, and is not occasioned by the pressure of some tumour on a nerve, the following plan of treatment should be adopted: when the state of the stomach permits the exhibition of narcotics, we may give the acetate of morphia, the extract of hyosciamus, conium, opium, aconite, stramonium, belladonna, or dulcamara, beginning with a very small dose, and gradually increasing it until the patient is decidedly easier; but if any bad effects arise in consequence of these medicines, they must be taken in less quantity, or altogether discontinued: it will, however, be proper to attempt to administer them by the skin, or in clysters, employing at the same time other remedies. It often happens that narcotics either exert no influence at all, or give rise to unpleasant symptoms, when taken alone; while from their combination with each other, or with some other medicine itself equally injurious or inert, the greatest benefit is derived: the principal substances of this class are valerian, camphor, musk, castor, guaiacum, oxide of zinc, preparations of antimony, emetic tartar, calomel, muriate of ammonia, rhubarb, &c. Hence have arisen the diversity and complication of the remedies recommended in this affection; and as there is no class of diseases so fugitive, and yet so stubborn, it is not surprising that its remedies are at the same time so numerous and so few. And thus we must not be discouraged when one fails, but try some other, for so long as the structure of the nerve is unaltered, there is a chance of success; and for this reason also we would extend still further the list of remedies, and include the tincture of galbanum combined with ether, the liquor arsenicalis with the thebiac tincture, to the

amount of six minims three times during the day, tartarized antimony and opium in equal proportions, commencing with one grain, which may be gradually raised to several grains daily, for the individual action of each is neutralized by their combination; the hydrocyanic acid, in very minute quantities; and, lastly, carbonate of iron, the amount of which that may be taken with impunity, extends from a scruple to one or two drachms daily.

It will also be proper to try such external applications as hold out any reasonable prospect of success, and which are not very painful; such, for instance, as frictions with ether, laudanum, compound camphor or soap liniment, or tincture of cantharides, galvanism, and electricity, in the manner described by Andrieux; hot narcotic cataplasms, or sinapisms over the seat of pain. Cold applications to the head are beneficial when the patient complains of a sense of ardent heat, and pain is increased by warmth; lastly, cupping, flagellation of the affected part, compression of the nerve, cauterization and acupuncture, are occasionally useful in moderating the violence of a paroxysm. If these remedies afford no relief, or, for some reason, a fair trial cannot be given to them, our only resource is in more powerful measures, such as mercurial friction, continued until salivation is produced, the application of a blister in the course of a nerve, or a plaster, the surface of which is sprinkled with tartarized antimony, placed behind the corresponding ear, the insertion of an issue, burning with moxa, and lastly, affusion of hot or ice cold water, according to its effect.

When neuralgia occupies a nerve of the extremities, as the brachial, sciatic, crural, &c. the remedy most likely to be useful, is the application of blisters, which should extend, if possible, from one end to the other of the affected nerve. If the pain is extremely

acute, the paroxysms frequent, and the affection decidedly of a nervous character, benefit may often be derived from the oil of turpentine, taken internally; and if this also fails, vapour baths, sulphureous or aromatic baths, moxa applied over the spot in which the pain seems concentrated, where the nerve is most superficial, and, in short, stimulating frictions of every kind, should be tried.

In intermittent neuralgia, wherever seated, cinchona, or the sulphate of quina administered in the intervals between the attack of the disease, and on each accession, ligature of the affected limb, applying exhausted glasses over the principal seat of the pain, or the various narcotics before enumerated, may be resorted to. In numerous instances of periodical neuralgia, coffee has been found very useful. Lastly, the general and local abstraction of blood when the patient is plethoric, may be tried as a last resource, but in general, it is of little benefit, except in those cases, in which the attacks are extremely violent.

["The chief and the most energetic remedies in neuralgia," observes Dr. Macculloch, "be the form what it may, are tonics; and of these, the most efficacious are bark and arsenic: the subcarbonate of iron is far less generally beneficial. Narcotics, as a means of diminishing pain during the painful state, are nearly useless, unless pushed to such an excess as to stupify the patient; in which case, it is probable their effects are injurious, by inducing indirectly, that debility which so prolongs and aggravates all the neuralgia. But when the acute stage is past, they become useful, as tending to remove that soreness which remains after the chief pain has ceased, and also by reducing the general irritation which has been excited by it. The usual full diet of persons in health, with a rational use of wine, forms an essential aid to the cure, and has often

proved a cure in itself, when used as replacing the opposite and pernicious system. The only local remedy from which I have really seen such advantageous effects as to induce me to recommend it, is the application of steam, directed by the usual means of a pipe to the affected part ; while of course, the same reasoning applies, if in a minor degree, to fomentations and hot water. I have often succeeded by means of a blast of steam, in removing almost instantaneously, a paroxysm of the severest neuralgia of the face.”]

[Dr. Macculloch condemns the practice of dividing the affected nerve, and the late Dr. Baillie, speaking of this operation, says, “it has in some instances prevented a return of the disease for one or two years, but has not, as far as I know, prevented it permanently.”]

NEURITIS.

Although the abstraction of blood is, as we have just mentioned, of little utility in even acute neuralgia, whether of the face or extremities, its effect is very different in inflammation of the nerves of the arm or thigh ; a fact, of which experience has fully satisfied us. In this case, our first duty is to open a vein in the arm, then to apply a large number of leeches in the course of the affected nerve, to cover the limb with emollient and narcotic cataplasms ; and, lastly, to immerse it, for as long a period as possible, in a warm bath. Sometimes, the severity of the pain is such, that it is necessary to prescribe opiates. When the condition of the stomach and bowels does not prohibit purgatives, they should be employed, as they often prove remedies of great efficacy in neuralgic disorders. Irritating frictions

with tincture of cantharides, or oil of turpentine combined with sulphuric acid, and the application of moxa in the course of the nerve, will be proper at a later period, when the acute inflammatory symptoms have disappeared, and the neuritis has assumed a chronic character, while the pain continues undiminished.

GENERAL DISEASES.

SCORBUTUS.

THE proper treatment, as well as the prevention of scurvy, is regimeneal, rather than medical; a fresh pure atmosphere, moderate exercise, warm dry clothing, wholesome food, a large proportion of fresh vegetables, beer, wine, and mental diversion, are the principal points to which our attentions should be directed. Vegetables, which contain a native acid, as lemons, oranges, gooseberries, apples, and especially, the juice of sorrel, taken to a large amount, are of the greatest benefit. Fruits, which are thoroughly ripe, roasted meat, fresh fish, and weak wine, should be the principal articles of food. If the patient is not too weak, occasional bathing will be advantageously employed; hæmorrhage or dysentery is best checked by mineral acids and vegetable astringents, both internally and externally, as kino, the bark of cinchona, pomegranate, or oak, the roots of calumba, rhatauy, bistort, tormentil, &c. Some practitioners have met with remarkable success in the employment of ipecacuanha in cases of very obstinate diarrhœa. When there are any ulcers, the best remedy is a lotion of vinegar and water, or of the decoction of bark; if the gums are affected, they should be touched with a pledget of lint, imbued with a mixture of honey and a solution of the chloride of lime. Gentle pressure is advantageous, wherever the situation of the parts, and other circumstances permit.

SYPHILIS.

In every affection, the syphilitic nature of which is ascertained, the plan most commonly pursued, is to put the patient on a course of mercury. This substance may be administered either internally, under the forms of submuriate, oxymuriate, &c. or externally, as an ointment or fumigation, according to the state of the digestive organs. The preparation most generally employed, is the chloride or oxymuriate, dissolved in distilled water, and some mucilaginous drink, so that the patient may take the fourth part of a grain, or half a grain, daily : it may also be exhibited in the form of pills, combined with opium, or any other substance calculated to diminish the gastric irritation occasioned by it.

Calomel, the acetate and nitrate of mercury, are also employed with the same intention, but much less frequently : the acetate or nitrate must be given at first in very minute doses, and gradually increased.

Mercurial friction is practised in the following manner : one or two drachms of ointment are rubbed in at each time ; on the first day, the extremities on one side are made the seat of the friction, on the next day, a warm bath is used, and on the third day, the other side of the body is subjected to the same process ; thus employing alternately, the bathing and rubbing.

Some practitioners treat syphilitic affections by baths impregnated with the oxymuriate of mercury ; for this purpose, the quantity must not exceed half an ounce at first, but may gradually be increased to two ounces. This may be of advantage when others have failed, or cannot for some reason be employed.

But whatever mode of administering mercury we

may prefer, it cannot be employed with safety, while a patient labours under any other affection besides syphilis. Throughout the mercurial course, the patient must be restricted to a light diet. He must be careful not to expose himself to a cold or damp atmosphere, and should wear flannel next to the skin, especially when the cutaneous surface is made the channel through which mercury is introduced into the system.

Lastly, a purgative should be occasionally administered, particularly if there is any danger to be apprehended from ptyalism; and indeed, whenever this supervenes, we should suspend for a time the employment of mercury.

Diaphoretics, as sarsaparilla, guaiacum, sassafras, are useful auxiliary remedies, and the muriate of gold has been recommended as a perfect substitute for mercury.

[The following formula is given by Magendie.

Muriate of gold and soda crystallized, 1 grain,

Powder of lycopodium or starch... 2 grains.

Begin with a fifteenth part of this quantity, and in a very gradual manner increase the dose to the strength of an eighth of a grain of the muriate. It is to be applied once a day, by frictions upon the tongue and gums.]

In conclusion, it may be laid down as a general rule, that in order to insure permanent success, the employment of antisyphilitic remedies must be persevered in, for as long a period after the disappearance of every symptom of syphilis, as the interval between the time of this event, and of the patient's entering upon his mercurial course.

SCROFULA.

Many of the observations applicable to scrofula, have been already made, while speaking of the diseases of the different organs in which it may be seated : very little, therefore, need to be added here concerning its treatment, which indeed, is regimeneal, rather than medical. The principal indication is to restrain the predominance of the lymphatic system : thus, exercise, cleanliness, warm clothing, friction with aromatic tinctures, cold bathing, large and well ventilated apartments exposed to the sun, a mild healthy climate, nourishing food, roast meat, wine, beer, &c. comprise nearly all the resources of which the practitioner can avail himself in the prevention or cure of this affection. No medicine can be recommended as capable of exerting much immediate influence over scrofula ; the preparations of cinchona and iron, and vegetable bitters, are, however, very useful, in keeping up the general health.

When the glands have become tumid, it is necessary to employ along with the measures above mentioned, frictions with the hydriodate of potash. The internal administration of the tincture of iodine is objectionable, from its tendency to excite inflammation in the stomach.

FEVERS.

EXANTHEMATOUS FEVERS.

SCARLATINA—RUBEOLA.

THE danger of these exanthemata, consists in their being accompanied with inflammation of some of the organs of the three splanchnic cavities: this complication may indeed be regarded as essential to scarlatina and rubeola; notwithstanding, in ordinary cases, the treatment of these affections is extremely simple, and not unfrequently little more is required, than the employment of tepid mucilaginous drinks. When the eruption is endeavouring to establish itself, pediluvia, impregnated with mustard, are very useful in promoting its developement; at the same time, anodynes may be given to allay the cough, while we endeavour to relieve the pain in the throat by the application of emollient cataplasms, and the use of astringent gargles.

These measures, with the employment of aperient medicines, and the admission of fresh air, comprehend every thing necessary to be done during the first and second stage of simple rubeola or scarlatina: when desquamation is nearly completed, and the mucous membrane of the stomach and bowels is little or not at all effected, aperients are especially indicated. They abridge the duration of the pulmonary catarrh, and preserve the skin from subsequent serous infiltration, to which it remains for a long time predisposed. The prevention of this dropsical effusion depends also very

materially upon the prudence and care of the patient in avoiding exposure to sudden changes of temperature, covering the surface of the body with flannel, during the whole period of convalescence, and in the regular employment of bathing and dry rubbing.

But these exanthemata do not always pass through their various stages with the same regularity : thus, sometimes, at the commencement of the patient's illness, a complication of sympathetic phenomena, and these of a very serious nature, throw the utmost obscurity over even the nature of the disease, and exceedingly embarrass the practitioner in treating it. Of this description are cerebral congestions, agitation, perpetual restlessness, great uneasiness, sense of suffocation, oppressive breathing, languor, head-ache, prostration of strength, collapse, with or without reaction, &c.

In such circumstances, it is necessary to make a careful examination into the state of every organ of the body ; and to consider what diseases are most prevalent : if there is reason to expect that the affection will prove to be of an eruptive nature, the practitioner should wait for its developement, without adopting any active treatment, unless to remove some urgent local symptom. Leeches may be applied behind the ears, on the outside of the throat, below the clavicles, or at the epigastrium ; according as the symptoms are those of arachnitis, angina, bronchitis, or gastritis. Should there be great general reaction, which cannot be explained by the condition of any one organ in particular, the abstraction of a moderate quantity of blood from the arm may be employed with much benefit. Lastly, sinapisms, cold affusion, and the internal exhibition of stimulants, will be necessary in cases of excessive prostration, not immediately dependent on active

disease ; but in other circumstances, we should interfere no more than to promote the functions of the skin by diluent drinks, pediluvia, or general bathing, until the disease assumes its decided character, when the formidable symptoms, especially those of gastro-enteritis, which preceded it, will often suddenly vanish. We must not, therefore, whenever the internal mucous membranes exhibit signs of irritation, hastily employ powerful antiphlogistic remedies, but bear in mind, that its natural tendency is to diminish, as eruption appears on the skin.

Whenever an irruption suddenly recedes, and the recession cannot be explained by any internal inflammation, the best means of restoring it, is the employment of a hot water or vapour bath.

When measles or scarlatina appears epidemically, it is highly important to study the character of the epidemic, and modify our plan of treatment according to the general influence of remedies over it, and the combination of symptoms in each case.

Some German physicians are of opinion, that belladonna is a preservative from scarlatina, and recommend it to be used for this purpose, morning and evening, in doses proportioned to the ages of those exposed to the contagion. In every case, it is the duty of the practitioner to recommend exclusion from general society, and the employment of lotions, with the solution of the chloride of lime, especially in severe epidemics. See also, *Arachnitis*, *Coryza*, *Ophthalmia*, *Bronchitis*, *Angina*, *Laryngitis*, *Gastro-enteritis*, &c.

MILIARIA.

In mild miliary fever, uncombined with internal inflammation, no other treatment is necessary than the employment of diluents, aperients, and mustard pediluvia.

When this affection spreads epidemically, there is some danger of receiving it from contagion; washing the skin with a solution of the chloride of lime is the most certain and powerful means of checking it: when combined with any affection of the brain, pulmonary organs, or those of digestion, all its importance is derived from the internal disorder, against which alone, it is necessary to direct our treatment. We therefore refer the reader to these diseases, and to *Rubeola* and *Scarlatina*.

VARIOLA.

Having already spoken so fully on the subject of the first stage of exanthematous fevers, it would be a repetition of what has been already said, to enter into details on the treatment which should be pursued in variola, before the developement of the eruption. The principal object of attention should be to defend the internal organs, especially the mucous membrane of the pulmonary and intestinal viscera, by the application of leeches and cataplasms to the abdomen, thorax, or throat, and the use of demulcent drinks, gargles and injections; if there is a high degree of fever, we must without hesitation draw blood from the arm, for the super-vention of pleuropneumonia, laryngitis, gastro-enteritis, or encephalitis, is much more to be dreaded than the cutaneous inflammation, however intense: we can only, by preserving in their full integrity,

the organs of the vital functions keep the patient alive, while the disease passes through its various periods, for it is altogether impossible either to prevent the developement of variolous pustules, limit their extent, or prevent their maturation. It has recently been attempted, and not without success, to cut short the progress of the disease, by cauterizing the pimples, on the first or second day of their eruption; the writer has effected the same object simply by taking off the epidermis beyond the inflammatory areola, and substituting for the variolous, an ordinary inflammation, produced by the point of the lancet. But is there not reason to believe, that suppuration is a necessary crisis, and that by thus counteracting the prescribed course of nature, we shall prevent the cure which it would effect? Some unfortunate cases seem to favour this opinion; yet experience simply proves, that affections of the lungs, bowels, brain, and other organs, are, in every respect, as severe in confluent as in distinct variola: our experience is at present scarcely sufficient to determine whether it may be possible, by a combination of local cauterizing, and ordinary antiphlogistic remedies, to prevent internal congestions, especially in the brain, which, in these cases, is most subject to them, and to check the ravages of variola.

When the eruption is confluent, it is proper to evacuate each pustule, to prevent, or at least to lessen, the bad consequences of the absorption of the variolous matter.

A slight attack of distinct small-pox requires nothing further than tepid, diluent and acidulated drinks, aperients, and a cool fresh atmosphere.

During convalescence, abscesses often form in various parts, without pain, or any other symptom of inflammation; the practitioner should open them with a bistoury, as soon as he discovers their exi-

ence, and it is his duty to assure himself whether they exist or not. See *Scarlatina*, *Rubeola*.

VARICELLA.

Varicella, like distinct variola, requires no other remedies than demulcent and slightly diaphoretic drinks, aperients, a cool fresh atmosphere, and hot pediluvia.

Like every other exanthematous disease, varicella, even in its earliest stage, is capable of giving rise to internal inflammation, more or less severe: hence, the necessity of carefully investigating the condition of the different organs. But if, as in the case we have described, when speaking of distinct variola, there are no decided symptoms of visceral disorder, except headache and fever, nothing more is indicated than the employment of aperients, pediluvia, and diluents; afterwards, the complaint should be left very much to itself, unless the vesicles are very numerous on the face, or symptoms of cerebral congestion arise; when it is advisable to abstract blood: in other cases, rest in bed, abstinence, diluent drinks, aperients, and fresh air, are sufficient.

Inflammation of the mucous membranes is seldom severe in varicella; it requires the same treatment as when occurring under other circumstances. See *Ophthalmia*, *Coryza*, *Pulmonary Catarrh*, *Gastro-enteritis*.

FEVERS.

TYPHUS.

AFTER having already minutely detailed the plan of treatment proper to be pursued in the diseases of every organ of the body, it may appear superfluous, if not inconsistent, to introduce a disease under the name of typhus, since, whatever it may be, it cannot but have some "local habitation." Yet it can scarcely be doubted, that there is a deleterious principle, whatever may be its nature or source, which, whenever the body is exposed to it, pervades the whole system, excites disorder in every organ susceptible of its influence, and impresses upon these affections, a peculiar and identical character. It is to a morbid condition of a greater or less number of organs, thus modified, that the name of typhus is appropriately given. Yellow fever, plague, camp, and prison fevers, express similar modifications.

When the system is under the full influence of this powerful and mysterious agent, the indications by which we distinguish local affections, are obscured, being, as it were, smothered under a universal stupor and oppression.

In some cases, prostration of strength and stupor form the prominent and characteristic phenomena; occurring in a longer or shorter time after the commencement of the attack, and generally terminating in death. This variety of fever has received the name of adynamic typhus.

In other cases, the focus of disordered action is sufficiently obvious; thus the abdominal viscera are very frequently the parts principally affected, as in

the yellow fever; while, in the typhus of the east, the axillary or inguinal glands, and the skin, have a similar predominance. (See Carbuncle and Malignant Pustule.)

Under whichever of these various appearances the disease may exist, it is one of the utmost danger, and in a large proportion of cases, terminates fatally, often leaving behind very little appreciable change of structure.

In the adynamic form of typhus, where there is marked prostration of muscular strength, a feeble pulse, and embarrassment of all the vital functions, it is necessary to sustain the powers of life by stimulants, as wine, opium, bark, &c.; these, with the solution of the chloride of soda or lime, taken internally, sponging the surface of the body with the same liquid, or with hot vinegar, friction with aromatic tinctures, and clysters of the above substances, are the principal measures to which we should have recourse. In this variety of typhus, blisters cannot be safely employed, as they are apt to occasion gangrene of the part over which they are applied; sinapisms are equally efficacious, and free from danger.

But, whenever typhus sets in with febrile reaction, and as long as this period of excitement continues, a totally opposite plan of treatment must be pursued; for the life of the patient depends on our activity and decision in the employment of antiphlogistic measures. Of these, bloodletting is the most valuable remedy which we possess, but it must be practised without delay, or the time will be gone by in which it can be beneficial or even safe. While the surface of the body is dry, and hotter than natural, cold affusion or sponging is highly beneficial, unless the patient complains of its being disagreeable to his feelings, or some pulmonary affection contra-indicates its employment.

Cutaneous revulsion, as by the application of sinapisms to the feet, forms also a part of the treatment proper during the period of excitement; but as soon as collapse supervenes, the measures recommended in the preceding paragraph must be substituted.

When typhus puts on an intermittent or remittent character, it requires the same treatment as the malignant intermittent fever. See that word.

For the local gangrene, which not unfrequently occurs in the course of typhus, consult the words *Angina Gangrenosa*, and *Malignant Pustule*.

The prevention of typhus is a point which ought never to be neglected; fumigations, and especially lotions of the chloride of lime, appear best calculated to effect this most desirable and important object.

Numerous minute particulars are comprised in the treatment of typhus, which have been already pointed out under the words *Gastro-enteritis*, *Dysentery*, *Cholera Morbus*; it is, therefore, unnecessary to repeat them here.

[Among the numerous English writers on the subject of fever, scarcely any holds a higher rank than the late Dr. Bateman. I shall therefore subjoin a short analysis of that portion of this author's work on *Typhus*, which relates to treatment.]

[When fever has existed during one or two days only, and excitement is not established, the prompt evacuation of the stomach and bowels, by the exhibition of an emetic and purgative, will, in most cases, occasion the diminution, and in some, even the total disappearance of the symptoms of fever. The simple evacuation of the bowels does not appear to answer the purpose; and it is probably in the effect of vomiting in equalizing the circulation, and determining to the surface, thus at the same time relieving the external chill and internal oppression, that the benefit chiefly consists.]

[After the stage of excitement has come on, it would be useless, and even dangerous, to attempt to abridge the course of fever in this way ; this object may, however, often be attained at an early period by venesection and the external application of cold water : for the introduction of this latter remedy, we are indebted to Dr. Currie, by whom, however, it was extravagantly extolled. Dr. Currie recommended affusion, but ablution is now almost universally substituted for it, as less inconvenient, fatiguing and alarming, and at the same time, equally efficacious. At any period of the disease, when the skin is hot and dry, this remedy may be employed with benefit.]

[The power of venesection in cutting short fever, is, at the present day, undisputed ; it should always be practised in proportion to the degree of inflammation, and arterial excitement. No supposed indication of debility should deter us, for such symptoms depend on the oppression of strength under the influence of disease, not on its exhaustion.]

[Throughout the whole course of fever, the bowels should be kept gently open, if necessary, by the aid of aperients ; free ventilation is a most important measure, and its invigorating influence contributes perhaps more than any thing else to support the powers of life : cold acidulated drinks are also useful.]

[Few medicines have attained greater celebrity in the treatment of fever than antimony, in consequence, probably, of the prevalence of the humoral pathology, which is thought to rid the system of the disease through the cutaneous transpiration ; but perspiration is now universally considered a symptom and consequence, not a cause of the cessation of fever ; besides the diaphoretic property of antimony is very uncertain, and depends on excitement, a state which it is our great object to subdue.]

[Opiates are, in general, decidedly injurious, and the more so, in proportion to the disturbance of the sensorium, the very symptom which they are intended to remedy; they augment thirst, heat, and general distress, parch the tongue, and lock up the excretions.]

[When the plan of treatment which we have pointed out, fails to arrest the progress of fever during its early and middle stages, the disease gradually assumes a different and more serious character, consisting, generally, in some considerable alteration in the intellect, pulse, muscular power, and appearance of the tongue, which renders the method of treatment much more difficult.]

[If active delirium has come on, the abstraction of blood is absolutely necessary, whatever may be the state of the pulse, and cloths repeatedly wetted with cold evaporating fluids, should be applied to the shaven scalp. A slighter degree of delirium is often at once removed by the application of a blister to the nucha; especially if at the same time the head is shaven and kept cool, and the bowels evacuated.]

[When subsultus tendinum, picking of the bed clothes, low muttering delirium, and tremor of the tongue have supervened, the disease is no longer under our control; yet it is important that our efforts should be so directed as to assist rather than counteract those of nature. These symptoms are directly and distinctly symptomatic of cerebral irritation; and though it would be imprudent to venture upon general bleeding at a period of the disease when much actual exhaustion of the physical powers has necessarily been produced, yet experience abundantly proves the safety and benefit of local bleeding and blistering; while no such benefit, but, on the contrary, evident aggravation of the symptoms, follow the use of wine and tonics, unless

the skin and tongue were moist, and the pulse under 120, and without any perceptible sharpness.]

[There is, however, one condition of fever, in which the liberal yet cautious exhibition of wine and similar stimulants is of the greatest benefit, namely, a state of sudden collapse, in which the skin is covered with cold and clammy sweats, the tongue moist, but loaded; the pulse very frequent, but so feeble and wavering as to be scarcely perceptible, and respiration imperfect and laborious. In such circumstances, which occur principally in old persons, the patient will die unless stimulants are given. Yet even here their effects must be most carefully watched, that they may be diminished or discontinued as soon as the slightest indication of over-excitement appears.]

[There are two other modifications of the symptoms of fever, in which the moderate use of some diffusible stimulant, as wine, appears to be beneficial, namely, the state of torpor which accompanies vibices, (in which purgatives are also necessary,) and the state of diarrhœa unattended with tenesmus or much disturbance of the head.]

[With respect to the exhibition of cinchona in fever, it will be sufficient to say that its ordinary consequences are, that the tongue, which the day before was moist, and exhibited a gray or yellowish mucous fur, has become dry or even brown, the skin is hotter or more parched, the cheek flushed, the pulse quicker and harder, thirst more intense, and sleep disturbed.]

[Purgatives may, in general, be employed with advantage during the whole course of typhus; but as their administration is not wholly devoid of danger, it should not be resorted to unnecessarily, especially when any disposition to abdominal inflammation exists.]

[In the course of fever, troublesome symptoms

frequently arise, requiring particular attention : among these may be mentioned vomiting, which commonly yields to ten or twelve grains of magnesia, taken three or four times a day, in peppermint water : diarrhœa is another very troublesome symptom ; in many, perhaps in most cases, it requires antiphlogistic and emollient remedies, but in others the hydrarg. cum creta, or the mistura cretæ with opium, is sufficient.]

[During convalescence, the most important thing is the regulation of the quantity and quality of food ; tonics often appear to impede rather than promote recovery.]

[The principles of treatment pointed out by Dr. Armstrong, in his lectures on typhus, are very similar. In order to adapt remedies with greater precision to the exact condition of the patient, he distinguishes three forms of continued typhus, the ardent, the intermediate, and the extreme. In the first, which occurs principally in young or robust subjects, and in which the skin is intensely hot and dry, the pulse rapid, full, and resisting, the tongue furred but moist, the face flushed, the respiration hurried, and the brain much disordered, nothing can save the patient's life but the copious abstraction of blood at a very early period. The head should be elevated, the hair shaven off, and cold applied as long as the heat continues higher than natural, while the bowels are to be kept gently open by calomel and rhubarb, assisted by castor oil. In the intermediate form, in which the symptoms are similar, but less severe, the copious abstraction of blood is unnecessary, and occasions a debility which adds much to the danger, and might have been avoided ; yet one or two moderate bleedings from the arm may be employed with much benefit. In either form, the fever assumes, about the termination of the first week, a different and peculiar character ; the

heat becomes less high on the surface, the pulse comparatively soft and compressible, the respiration feeble, the tongue dry, and covered with a brown varnish, and the muscular power prostrate: mild aperients, fresh air, quietude, a bland diet, cooling acidulated drinks, are then the only remedies which can be employed with safety.]

[The third form is that wherein the symptoms which, in other cases, supervene towards the end of the first week, exist almost from the beginning. In all cases of this kind, general bloodletting is, at any period, inadmissible: we should have recourse to cautious leeching, when the patient complains of constant pain in any important organ, the recumbent posture, even while passing the stools or urine, lest syncope and death should supervene, aperients, a light diet, diluted lemon juice, solution of chlorine, one or two drachms of which, largely diluted with pure water, may be taken in the course of the twenty-four hours, and above all, a constant current of fresh air from without. Dr. Armstrong condemns, no less than Dr. Bateman, the exhibition of bark: with respect to wine, he lays down the following criterion, by which we may judge whether its exhibition in the last stage of fever, is beneficial or injurious; namely, if the skin becomes hot, the tongue drier, the pulse quicker, the breathing more hurried, and the patient more oppressed, or more restless, the wine is prejudicial; if an opposite set of symptoms succeed its employment, it may, in moderate quantities, prove highly useful.]

[In the Edin. Med. and Surg. Journal, numerous cases are related by Dr. Alison, and I have myself seen many, which appeared to prove that typhus may assume a character, in which the almost unlimited employment of stimulants is necessary and beneficial.]

INTERMITTENT AND REMITTENT FEVERS.

In every intermittent fever, it is impossible to form a rational plan of treatment, until it has been ascertained what organs are involved in the disease; because the local disturbance demands equally the attention of the practitioner. Yet, it must not be forgotten, that the intermittent fever is a specific disease, depending on some peculiar condition of the atmosphere, or occasionally on some idiosyncrasy in the patient, and that, consequently, the treatment of it must be also specific. Experience shows, that when the attention of the practitioner is occupied exclusively with the local disease, the ague often continues and even becomes worse, and *vice versâ*.

In every case, therefore, of ague, in which any important organ is involved, that is, whenever it is the seat of severe pain, and its functions are embarrassed, it is advisable to have recourse, at an early period, to the general or local abstraction of blood. This operation must never be practised during the period of intermission, while the skin remains cold.

If the fever depended on the local inflammation, the first indication would, without doubt, in this as in other cases, be to adopt the ordinary antiphlogistic measures, and employ febrifuges only as auxiliary and secondary remedies, but the opposite of this is the truth.

It is, therefore, in our opinion, the duty of the practitioner to begin at once the specific treatment of ague, for delay tends to induce visceral disorder, and it is much easier to prevent irregular determinations of blood, by curing the fever, of which they are a part, than to destroy the effects which they leave behind them. We would, nevertheless, recommend, that local and antiphlogistic should accompany specific and febrifuge remedies, to obviate the danger which may arise from the

too sudden suppression of ague, while some local disorder has been overlooked.

The sulphate of quina is the grand specific in the cure of every species of intermittent fever. Like every other therapeutical agent employed in fevers attended with periodical exacerbations, it should be exhibited during the period of apyrexia, it must be given in a sufficient quantity to prevent the developement of the fit: four or six grains of the sulphate in a mixture containing also a few minims of sulphuric acid, are often sufficient for this purpose; while in some cases, even twelve grains have produced little sensible effect. So far as our own experience in public and private practice is any authority, we confidently assert, that even a scruple, or twenty-four grains, may be prescribed with safety, and the happiest results, when smaller doses have proved unsuccessful.*

It may be laid down as a general rule, that the dose of a febrifuge should be proportioned to the severity and frequency of the paroxysms, and that a large quantity is requisite in aged phlegmatic individuals, and during a cold and damp season.

If the stomach is in such a state that the sulphate of quina cannot be taken in the ordinary way, it may be administered by the rectum, and even through the skin, previously deprived of the cuticle: in this last case, the salt must be dissolved, and then mixed up with some oleaginous substance; the quantity proper for this purpose is between six and twelve grains.

From some recent researches, it would appear that the sulphate of cinchonia is a medicine of

* See the *Revue Médicale*, tome i. page 393. année 1824.

equal efficacy with the sulphate of quina : its dose and mode of exhibition are the same.

If, owing to any idiosyncrasy, the sulphate of quina cannot be employed, the cinchona cordifolia, quercus, cascarilla, quassia, menyathes, serpentaria, gentian, sulphate of iron, coffee, muriates of potash or ammonia, are excellent substitutes.

Frictions over the abdomen with tartar emetic ointment, the internal employment of the liquor arsenicalis, are also worthy of high commendation.

If, during the progress of a simple intermittent fever, any malignant symptom should arise, the dose of the sulphate of quina must be immediately increased, especially if a very short period of apyrexia has succeeded two threatening paroxysms, for the third, if not checked, very frequently proves fatal.

When the stomach does not well support the sulphate of quinine, much benefit is derived from combining it with opium, musk, camphor, canella, or it may be more prudent to administer it by the rectum, or the skin.

During a fit, it is useless to attempt to do much : the patient must keep in bed ; as soon as chilliness and shivering come on, hot aromatic drinks should be administered ; and when the period of reaction succeeds, cold acidulated fluids are indicated, as gentle diaphoretics are in the sweating stage. During the interval of apyrexia, a moderate quantity of bland food may be allowed.

In cases where it is important to cut short an attack, and in which no febrifuge medicines have been exhibited, it is often possible to effect this object by the gradual exhibition of the tincture of opium, by the application of several exhausted glasses to the epigastrium and back, and lastly,

by a ligature tied around each of the extremities, taking care, however, to unloose any one which may occasion much uneasiness.*

Even in convalescence, after an attack of ague, the patient is not secure from danger, and requires the watchful care of his medical attendant: the least exposure to a cold or humid atmosphere, an error in diet, any powerful moral emotion, or the injudicious employment of medicine, may occasion a new attack, especially when a patient resides in a situation which would predispose him to it: in this latter case, the practitioner should always recommend the removal into some more healthy situation.

Persons who are exposed to a climate in which intermittent fever prevails epidemically, may most effectually preserve themselves from its attack, by care in avoiding sudden changes of temperature, conforming their dress to the varying state of the weather, and by the habitual use of flannel clothing; keeping out at sea in foggy weather, and passing the night in places which are regarded as centres of the miasma, are also to be carefully avoided.

Malignant Intermittent and Remittent Fevers.—

As soon as the malignant character of a periodical fever is detected, no time should be lost before the administration of the sulphate of quina or cinchona, to such an amount as, if possible, to cut short the disease at once. In such circumstances, even twenty grains, and more, may be taken during the interval of apyrexia, without danger. If this interval is of short duration, these salts may be dissolved, with the assistance of a few minims of sulphuric acid, in some mucilaginous mixture, which the patient should be directed to take in two or three

* See some observations on this subject in the Bibliothèque Médicale, année, 1820.

doses, at intervals more or less distant, according as the period of apyrexia is longer or shorter, or that the last portion of the sulphate may be taken within two hours of the expected return of the paroxysm.

But when the practitioner is called in after its accession, or has failed in attempting to prevent its developement, all that he can do is to provide against the local and general consequences which may be likely to ensue in the brain, spinal marrow, heart, alimentary canal, skin, &c. by the various means recommended under *Arachnitis*, *Encephalitis*, *Apoplexy*, *Myelitis*, *Peripneumonia*, *Gastro-enteritis*, *Cholera Morbus*, *Intermittent Fever*.

POISONING.

Poisoning by Mineral and Vegetable Substances.

—In every case of poisoning; our first object is to remove the poisonous substance by provoking vomiting; for this purpose, we should first try the effect of filling the stomach with warm water, and tickling the uvula with a feather. If these measures do not succeed, an emetic must be administered, or rather a double syringe introduced, by which liquids may be injected into and extracted from the stomach at the same time. When the nature of the poison is known, and there is reason to believe that it is still in the stomach, its antidote should be administered. But, on the contrary, when it is more probable that the poison has passed into the intestines, a purgative draught and injections must be resorted to without delay, to facilitate its expulsion.

After having thus fulfilled these primary indications, the next object to which the practitioner should direct his attention is the prevention of the secondary action of the poison on the system generally, especially on the mucous membrane of the stomach and bowels.

Into the details of the treatment necessary for this purpose we shall now enter.

IRRITATING POISONS.

Preparations of Arsenic.—Administer large draughts of sugar and water, a third part of which

should be magnesia or lime water, and afterwards milk, demulcents, farinaceous food, and employ whatever measures may be indicated by the degree of inflammation.

Preparations of Antimony.—Administer a weak infusion of gall nuts, or, if this cannot be easily procured, a decoction of cinchona, or a strong infusion of tea; crude opium also, in the dose of two or three grains, is of considerable service after the evacuation of the poison.

Preparations of Copper.—Administer an albuminous mixture, consisting of the whites of a dozen eggs and a pint of water; or if this cannot readily be obtained, a similar mixture of flour and water may be substituted; flour acts as an antidote, through the gluten which it contains.

Preparations of Silver.—A weak solution of common salt instantly decomposes nitrate of silver.

Preparations of Gold, Zinc, and Bismuth—The same treatment is necessary as in cases of poisoning by arsenic.

Preparations of Mercury.—The albuminous mixture (consisting of the whites of eggs beaten up with water) and a mixture of flour and water, are the best antidotes against mercury. The treatment of the secondary effects of this substance is detailed under *Stomatitis and Colica Pictonum*.

Preparations of Lead and Baryta.—A weak solution of the sulphate of magnesia or soda, and, when any salt of lead has been taken, a solution of five grains of the sulphuret of potash. See also *Colica Pictonum*.

Preparations of Pewter.—Milk diluted with water is the best remedy, but it is not strictly an antidote.

Nitrate of Potash.—(See *Preparations of Arsenic*.) This salt, when taken during illness, is not, as many toxicologists assert, a poison, even in large doses.

The same observation partially applies to tartar emetic. See *Pneumonia*.

Strong Acids.—Soap, lime, and magnesia copiously diluted in water, decompose the acid, and form inert salts.

Hydrocyanic Acid.—The liquor ammoniæ, strong coffee, and diluted mineral acids, may be useful if only a very small quantity of the poison has been taken.

Alkalies and their compounds.—Administer the vegetable acids.

Phosphorus and its compounds.—*Iodine*.—The solution of magnesia and mucilaginous drinks.

Cantharides.—Magnesia, mucilaginous drinks, frictions, fomentations with camphor liniment over the abdomen and organs of generation, protracted warm bathing and blood-letting.

Glass.—The patient should be directed to take such articles of food as may envelope the fragments of glass, in order to prevent their mechanical action upon the coats of the stomach and bowels; potatoes and farinaceous food generally.

After having thus attempted to decompose or neutralize any portion of the poison which may remain in the alimentary canal, our next object should be to remove the irritation which has been excited by it, by the general and local abstraction of blood. cataplasms, fomentations, warm bathing, and the various methods recommended under *Gastritis*, *Enteritis*, and *Gastro-Enteritis*.

POISONING BY NARCOTICS.

Narcotic Poisons.—Diluted vegetable acids, coffee, and the abstraction of blood, whenever there are any signs of cerebral congestion, constitute the most effectual antidotes, after the stomach has been evacuated by means of an emetic and the syringe before described.

POISONING BY ACRID NARCOTICS.

Narcotico-acrid Poisons.—First, evacuate the stomach, then administer vegetable acids, coffee, and if necessary, draw blood from the arm; acids must not be given before the stomach has been evacuated, as they would promote its absorption.

If the poisoning has been occasioned by nuxvomica, faba sancti ignatii, the upas tree, &c., ether combined with the oil of turpentine is an excellent remedy; two drachms of each should be contained in a mixture, of which a tea-spoonful is to be taken every five or ten minutes; but the most important object is to maintain the pulmonary circulation by artificial respiration, or rather by means of galvanism, for patients poisoned in this way die in a state of asphyxia.

SEPTIC POISONS.

Administer an emetic, and afterwards a few drops of ether, taken in aromatic and acidulated water, or a purgative, if any poisonous matter remains in the bowels.

HYDROPHOBIA.

Every attempt to cure hydrophobia having been hitherto unsuccessful, it is not worth while to enumerate the various remedies which have been proposed. The only measure in which the least confidence can be placed, and this refers only to the prevention, not to the cure of hydrophobia, is the complete excision of the part to which the virus has been applied, together with immediate and profound cauterization of the wound, and the use of lotions of chloride of lime: that no time may be lost during the preparations necessary for these operations, it is proper to clean the wound with water, and to affix over it an exhausted glass, a wine glass or tumbler, for instance.

However long it may be after the application of the poison that a practitioner is called in to the case, he should make it an invariable rule to cauterize the wounded part, although cicatrization may have taken place; for the virus may remain latent for a long time, and then propagate itself from that point throughout the whole system.

Although the appearance of pustules under the tongue some days after inoculation by a rabid animal is not quite ascertained, yet it will be well to look for them, and destroy them should they be detected.

When hydrophobia has fully declared itself, the practitioner must act according to his own discretion, employing any rational measure which his own genius may suggest. By such experiments some one may at length be happy enough to discover the remedy of this opprobrium of our profession.

VENOMOUS SERPENTS.

Immediately after the bite, a strong ligature should be tied above the affected part, if it is in one of the extremities, and an exhausted glass affixed to the wound, which as soon as possible must be cauterized. Professor Paletta recommends placing the patient before a great fire as a more effectual remedy than any other: it is proper to cover the wound with compresses imbued with oil and ammonia, to cover all with very hot flannels, and exhibit a small quantity of ammonia in a glass of some diaphoretic liquid.

STINGS OF INSECTS.

An exhausted glass should be affixed over the wound, after which it should be washed with a solution of the chloride of lime, or water containing a little ammonia. If inflammation supervenes, compresses wetted with a solution of the acetate of lead are useful.

POISONING BY GASES.

Carbonic Acid—Carbonic Oxide.—After having brought the patient into the fresh air, the first thing which should be attended to in every case of asphyxia is to establish artificial respiration: whenever oxygen gas can be procured for this purpose, it is much better than common atmospheric air, at the same time we must endeavour, by the employment of every variety of stimulants, to kindle up the almost extinguished spark of life

Of such agents galvanism is by far the most powerful, and should be resorted to as early as possible, one of the wires being placed in the mouth, the other in the rectum, in the manner before described. (See page 101.)

Holding ammonia and ether to the nostrils, tickling the uvula with a feather, friction over the region of the heart with aromatic tinctures, aromatic vinegar, or spirit of camphor, the application of sinapisms to the thighs, boiling water or moxa to the epigastrium, and exhausted glasses over the thorax, should be resorted to in rapid succession. In every case it is most prudent to open a vein in the arm or neck.

The secondary consequences of this species of asphyxia, such as pain in the head, spasms, local paralysis, and the various other symptoms of cerebral disorder, which are apt to ensue, require the ordinary antiphlogistic treatment.

Poisoning by Sulphuretted Hydrogen and Hydro-sulphuret of Ammonia.—In addition to the measures recommended above, it is proper to have recourse to the internal exhibition of the solution of the chloride of lime, and the inspiration of chlorine gas, in order to decompose any mephitic gas which may have found its way into the lungs.

The secondary effects of this poison should be combated by the lancet and cold affusions.

ASPHYXIA.

Asphyxia from want of respirable air.—Bringing the patient into a fresh atmosphere, artificial respiration, galvanism, electricity, stimulating frictions, purgative injections, counter-irritants to the skin, and general bleeding, if there should exist

any symptoms of cerebral or pulmonary congestion, constitute the treatment to which we must have recourse.

Asphyxia from drowning.—After having taken off the wet clothes, we should endeavour gradually to restore the natural temperature of the surface by means of hot napkins, placing the body almost horizontally, the head being a little elevated, and, if possible, make the patient swallow a few spoonfuls of some aromatic stimulant: the subsequent treatment is the same as in cases of asphyxia from carbonic acid.

Asphyxia from hanging.—The abstraction of blood is the best means of restoring life, and preventing any bad consequences.

Asphyxia of new-born infants.—In the first place, clear the mouth from the mucosities which prevent the access of atmospheric air to the lungs; then blow air into the trachea; if the infant appears robust, and the skin of a purple hue, the blood should be permitted to flow from the umbilical cord; but if it is feeble and pale, stimulating frictions, and plunging the infant into hot wine, must be resorted to.

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